United States
Department of
Agriculture

Animal and
Plant Health
Inspection
Service

Veterinary
Services

APHIS 91-18

A Guide for Accredited Veterinarians

No accreditation may be granted unless a completed application form has been received (9 CFR 161). FORM APPROVED OMB NO. 0579-0032

U.S. DEPARTMENT OF AGRICULTURE
ANIMAL AND PLANT HEALTH INSPECTION SERVICE
VETERINARY SERVICES

APPLICATION FOR VETERINARY ACCREDITATION

INSTRUCTIONS: Submit an original and one copy *(typed or printed)* to the Veterinary Services State Office in the State to which you are applying. Retain one copy. Privacy Act Notice on reverse.

1. NAME AND MAILING ADDRESS OF APPLICANT *(Include Zip Code - Indicate name as desired on certificate)*

2. SOCIAL SECURITY NUMBER

3. VETERINARY COLLEGE ATTENDED AND DATE GRADUATED

4. STATE IN WHICH ACCREDITATION IS REQUESTED AND VETERINARY LICENSE NO.

5. OTHER STATES IN WHICH LICENSED *(If none, so state)*

STANDARDS FOR ACCREDITED VETERINARIANS

(Excerpts from CFR, Part 161.2, "Standards for Accredited Veterinarians." Standards for Accredited Veterinarians and Rules of Practice are provided by the Federal Area Veterinarian in Charge.)

An accredited veterinarian shall perform official duties in accordance with the following standards:

(a) Prior to completing and signing a certificate with respect to animals or poultry, the accredited veterinarian shall individually inspect such animals or poultry in accordance with professionally accepted procedures.

(b) Certificates, forms, and reports shall be accurately and fully completed, including identification of animals, and shall be distributed according to instructions issued by the State Animal Health Official or the Area Veterinarian in Charge, or both.

(c) Certificates issued by an accredited veterinarian that reflect results of tests performed by another accredited veterinarian shall clearly indicate the name of the veterinarian conducting the tests, the place where the tests were conducted, and the date and results of the tests.

(d) Official tests and vaccinations shall be applied according to procedures and standard techniques prescribed by the State Animal Health Official or the Area Veterinarian in Charge, or both.

(e) Reactor animals disclosed by tests shall be identified within prescribed time limitations and according to State/Federal instructions issued by the State Animal Health Official or the Area Veterinarian in Charge, or both.

(f) All diagnosed or suspected cases of diseases of livestock or poultry named in § 71.3 (a) and (b) of Part 71, Subchapter C, of this chapter, including any vesicular conditions, and horses considered sored by designated accredited veterinarians, shall be reported immediately to the appropriate State Animal Health Official or the Area Veterinarian in Charge.

(g) Professionally accepted sanitary procedures shall be followed to minimize the danger of spread of disease between animals and between premises.

(h) The accredited veterinarian shall keep currently informed on State and Federal policies, regulations, and procedures concerning livestock disease control and eradication and shall advise livestock owners, shippers, and other interested parties accordingly.

(i) Accredited veterinarians shall use drugs, chemicals, vaccines, or serum, or other biological product authorized for use under Federal regulations or cooperative disease eradication programs only as directed by Federal or State laws and regulations or as instructed by the Area Veterinarian in Charge or State Veterinarian.

(j) An accredited veterinarian shall be responsible for the proper use and prevent the misuse of all certificates, forms, records, tags, brands, bands, etc. used in work as an accredited veterinarian.

(k) Accredited veterinarians acting under regulations persuant to the Horse Protection Act of 1970 shall thoroughly examine each animal in a professionally acceptable manner, to determine whether or not each horse is in compliance with said Act.

I request to be accredited–

1. To inspect animals and poultry and apply tests for intrastate, interstate or export shipment and to issue official certificates to accompany such animals in compliance with applicable State and Federal Regulations.
2. To participate in cooperative State/Federal programs for the control and eradication of diseases of domestic animals, including, but not limited to, tuberculosis, brucellosis, hog cholera, and scabies.
3. To perform functions in accordance with regulations issued pursuant to the Horse Protection Act of 1970.

I agree to conduct all activities as an accredited veterinarian in accordance with the Standards for Accredited Veterinarians contained in Title 9 Code of Federal Regulations, Subchapter I, Part 161, Section 161.2, and any amendments thereto which may subsequently be issued, and in accordance with instructions received from State and Federal Animal Health Officials of the State in which accreditation is requested as specified above. I understand that my participation as an accredited veterinarian will be subject to the provisions of Title 9 Code of Federal Regulations, Subchapter I.

I hereby certify that the information herein is true and correct.

SIGNATURE OF VETERINARIAN

DATE OF APPLICATION

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PART I

Veterinary Services, Its Responsibilities, and Associated Responsibilities of Accredited Veterinarians

Veterinary Services (VS), Animal and Plant Health Inspection Service (APHIS), is responsible at the Federal level for formulation and administration of cooperative State-Federal programs for control and eradication of animal diseases. Administratively, VS is organized into five regions and 45 area offices, usually covering 1 State. There is a Federal Area Veterinarian in Charge in each area.

Responsibility for protecting the health of the Nation's livestock and poultry encompasses activities that include full-scale eradication programs, more limited activities in certain diseases, epidemiologic surveys, laboratory and field diagnostic services, regulation of biological production and marketing, and a continuing interest in all animal diseases, domestic as well as foreign, that pose a threat to the Nation's animal food supply.

This is a summary of some of those activities and their relationship to the activities of accredited veterinarians.

A. The accredited veterinarian: A representative of the Government

The accredited veterinarian, in assuming responsibilities for disease and parasite eradication and other Government programs, becomes a representative of the Government and, as such, must support program policies. He should accept his full share of the program workload consistent with his available time. In estimating his participation, early completion of assignments should receive primary consideration. He should be willing to keep himself fully informed of the details of the program, as well as advances in the principles of eradication. He should perform all services in accordance with State and Federal laws and regulations and with approved procedures. As a representative of the Government and the veterinary profession, he should observe the highest standards of professional conduct and skill.

B. Laws, regulations, and rules

Accredited veterinarians need to understand the interrelationship of State and Federal rules and regulations with, for example, the Brucellosis Uniform Methods and Rules. For example, each State has entered into an agreement with the United States Department of Agriculture to conduct a

brucellosis eradication program within the State. The Brucellosis Uniform Methods and Rules is the official guideline used to accomplish brucellosis eradication within each respective State and provides the basis for Federal support of the brucellosis eradication effort. A violation of the Brucellosis Uniform Methods and Rules, as such, is not chargeable as a criminal violation but does represent a deficiency in operation of the brucellosis eradication program.

Each State has laws and regulations which regulate movement of animals within that State. Failure to comply with State laws and regulations may result in criminial prosecution by the State.

Federal interstate regulations apply to livestock and poultry that move across State lines. Failure to comply with Federal regulations may result in criminal prosecution under Federal law in a U.S. District Court.

Federal import and export regulations apply to importation and exportation of livestock and poultry. A violation of import or export regulations is a Federal offense and may result in a criminal prosecution in a U.S. District Court. Federal regulations are found in Title 9, Code of Federal Regulations (CFR).

A particular movement of livestock or poultry could be in violation of one or more of the requirements outlined above.

Accredited veterinarians are responsible for knowing and complying with the requirements for movement of livestock and poultry outlined in the Standards for Accredited Veterinarians found in Title 9, CFR, Part 161.2.

Accredited veterinarians may be charged as principals in a criminal violation if they aid and abet illegal movement or, in fact, cause illegal movement of the livestock or poultry in question. In addition, accredited veterinarians may be named as defendants in civil actions under the implied warranty provisions of the Uniform Commercial Code.

C. Prevention of importation or interstate movement of diseased animals

1. Interstate and intrastate movement of livestock

The early warning line in protection of the Nation's animal food supply is the veterinarians on the ranches and farms. The second defense is the veterinarians at the centers of livestock concentration-stockyards and livestock markets-along all lines of transportation. Duties of accredited veterinarians at ranches and farms are:

-Inspect, test, vaccinate, administer treatment, and perform other veterinary functions in accordance with State and Federal regulations, and in conformance with eradication program standards.

-Advise owners and shippers of the regulatory requirements of the State of destination.

-Issue health certificates, after careful inspection, attesting to the health of the animals presented for movement interstate and intrastate according to State and Federal regulations, and ensuring that diseased or uninspected animals are not included in the certification.

-Ensure, before a certificate is issued, that reactors are properly tagged and branded and that the approved destination of animals is placed on VS Form 1-27.

-Cooperate with animal disease eradication officials in carrying out and enforcing State and Federal regulations.

-Tag and brand reactor animals, when required by program standards, and issue proper permits for movement (VS Form 1-27 or similar document).

-Cooperate with and support State and Federal veterinarians in carrying out and enforcing animal health regulations.

-Report the presence of reportable diseases.

The designation of specifically approved stockyards and livestock markets was authorized under Federal regulations on January 1, 1957.

In addition to specifically approved yards and markets, those markets moving animals in interstate commerce are required to post their tariffs by the Packers and Stockyards (P&S) Administration. Such posted markets are required to keep records of animals, weights, and transactions.

Duties of accredited veterinarians at specifically approved and P&S posted markets are:

-Make careful inspection of animals, before issuing certificates, to ensure that only healthy animals are permitted to be moved.

-Promptly notify State or Federal officials concerned whenever evidence of a reportable communicable disease is found.

-Supervise the proper disposition of exposed and diseased animals.

-Supervise cleaning and disinfection of pens, premises, and vehicles that have contained diseased animals.

-Test, vaccinate, and issue certificates of animal health to comply with Federal regulations, as well as those of the State of destination.

-Inspect animals for compliance with Federal regulations.

-Issue certificates that are clear, accurate, and legible, and make prompt distribution of these as required by State and Federal regulations.

Almost all States have health requirements governing admission of animals from other States and laws and regulations controlling movement of livestock within the State. Accredited veterinarians should be familiar with State and Federal regulations on livestock movements. These are set forth in APHIS 91-17-7, "Health Requirements and Regulations Governing the Interstate and International Movement of Livestock and Poultry," published by APHIS, U.S. Department of Agriculture. Unqualified acceptance and conscientious performance of all duties involved in the interstate and intrastate movement of livestock is a basic responsibility of accredited veterinarians. Failure to properly carry out duties concerning issuance of health certificates is a common reason for veterinarians to lose accreditation.

2. Animal identification

Identification of cattle can be divided into temporary identification and permanent identification.

Temporary identification of cattle is accomplished by use of approved backtags, applied at concentration points or at slaughter, which identify the cattle back to the herd of origin. Identification with backtags, with proper record-keeping, has been a very effective tool in control and eradication of cattle diseases.

Permanent identification of cattle is accomplished by use of approved eartags applied usually when they are brucellosis vaccinated or tested. Animals with permanent identification tags can be traced back to the herd of origin if accurate records are available. It is important to use the existing eartag for identification on all subsequent tests and to apply new eartags only when animals are untagged.

The swine identification program is similar to the cattle identification program, with eartags, backtags, and tattoos used for identification.

3. Market cattle identification program

The Market Cattle Identification Program was developed to monitor animals for disease conditions and to provide for tracing of diseased animals to the herd of origin in substitution of whole herd testing for diseases such as brucellosis and tuberculosis in cattle. Monitoring of animals at concentration points and at slaughter was determined to be more cost effective to detect disease than testing all herds on the farm of origin. Diseased cattle that are identified properly can be traced back effectively to the herd of origin where appropriate disease control or eradication measures can be carried out.

4. Anaplasmosis

As an infectious disease of cattle, anaplasmosis comes under Federal laws and regulations (Part 75, 9 CFR) that prohibit interstate movement of diseased animals. Some States also have requirements that pertain to anaplasmosis; therefore, it is necessary that accredited veterinarians check not only the Federal requirements, but also the requirements of the State of destination before issuing interstate health certificates.

There are several useful tools in diagnosing and handling anaplasmosis--the complement-fixation (CF) test, the card agglutination test, a killed vaccine, direct blood smear examinations, antibiotic treatments, reactor control, sanitation, and others. Many herds have been freed of the infection by judicious use of test and treatment. Hawaii has eradicated anaplasmosis through a test and disposal program and now maintains its anaplasmosis-free status through rigid testing of imports. Other States offer assistance in establishing anaplasmosis-free herds.

Veterinary Services, in cooperation with State animal disease control officials and cooperating livestock producers, has conducted surveys and field studies to determine the distribution and prevalence of anaplasmosis. CF testing services are provided by National Veterinary Services Laboratories, Animal and Plant Health Inspection Service, USDA, Ames, IA 50010, as well as at State-Federal cooperative laboratories in many States. Antigen used for both CF and card agglutination tests is prepared and distributed to approved State-Federal laboratories throughout the United States. Veterinary Services also trains serologists from cooperating laboratories in conducting these tests.

5. Poultry diseases

Poultry diseases have been reported to cost producers about $300 million annually. Respiratory diseases, such as infectious bronchitis, Newcastle disease, and chronic

respiratory disease (CRD) triggered by Mycoplasma organisms and complicated by Escherichia coli cause a major part of this loss. Airsacculitis and related conditions produced by respiratory diseases account for major losses of turkeys in federally inspected processing plants. Veterinarians who inspect flocks for interstate shipment or for export should be alert for evidence and history of respiratory diseases. The serum plate agglutination test plus the hemagglutination inhibition test are used commonly to diagnose mycoplasmosis of poultry caused by Mycoplasma gallisepticum, M. synoviae, and M. meleagridis.

Avian leukosis causes flock mortality, and condemnation of carcass losses has been estimated at $65 million annually. This condition is a major cause of condemnations of young chickens in federally inspected poultry processing plants. Since development of an effective vaccine, the numbers of carcasses condemned for this condition have been reduced greatly. Even with vaccination, heavy losses from condemnation and mortality still can occur under certain circumstances.

No Federal interstate shipping requirements exist for poultry relative to freedom from Salmonella pullorum or S. gallinarum, the causative organisms of pullorum and fowl typhoid diseases; however, many receiving States require that inshipped hatching eggs and poultry, except poultry intended for immediate slaughter, originate from flocks participating in the National Poultry Improvement Plan (NPIP) or equivalent programs. Accredited veterinarians may be called upon to inspect, test, and certify poultry shipments from NPIP flocks for interstate or export movement. For export to foreign countries, VS Form 17-6 is used to certify as to the health of the birds or the originating breeding flock(s) in the case of baby poultry or hatching eggs. They, therefore, should be familiar with the NPIP and the requirements for the various disease control programs. These requirements may be found in the National Poultry Improvement Plan and Auxiliary Provisions (APHIS 91-40). Other useful information concerning NPIP activities may be found in the following NPIP publications: Directory of Participants Handling Egg-Type and Meat-Type Chickens and Turkeys (APHIS 91-41), Directory of Participants Handling Waterfowl, Exhibition Poultry, and Game Birds (APHIS 91-42), and the annual Tables on Hatchery and Flock Participation (APHIS 91-43).

Information about the NPIP may be obtained from the office of the State Veterinarian, NPIP State Contact Representative, other appropriate State poultry disease control official, or the Federal Area Veterinarian in Charge, Veterinary Services. Most States participate in a cooperative State-Federal system

for reporting diagnosis and outbreaks of pullorum and fowl typhoid diseases. Accredited veterinarians should submit such reports to the appropriate State poultry disease control official.

Regulations of the receiving State regarding shipment of poultry into that State should be determined before movement. The office of the responsible disease control official can provide this information.

Most States require routine reporting of many endemic diseases of poultry. More information on reportable or other poultry diseases may be obtained from the office of the State disease control official.

Psittacosis (chlamydiosis or ornithosis) outbreaks or suspected cases should be reported promptly. Confirmation of diagnosis is based on isolation of the chlamydial agent. Federal regulations prohibit interstate movement of live poultry, carcasses, parts, or offal from poultry affected with ornithosis (See Title 9, CFR, Part 82, for more detailed information.)

Poultry disease outbreaks that manifest unusual virulence suggestive of an exotic disease, such as fowl plague or exotic Newcastle disease, should be reported immediately to appropriate State and Federal disease control officials. Live poultry affected with or exposed to these diseases or carcasses so affected may not be moved interstate for any purpose. (See Title 9, CFR, Part 81 and Part 82, for more detailed information.)

a. Exotic Newcastle disease

Exotic Newcastle disease refers to the highly virulent form of Newcastle disease that results in very high mortality rates in all susceptible avian species. This form of Newcastle disease results in early death of chicken embryos (velogenic) and severe hemorrhagic lesions of the digestive tract (viscerotropic). Other names for this form of Newcastle disease are velogenic viscerotropic Newcastle disease (VVND), Asiatic Newcastle disease, and Doyle's form of Newcastle disease. The agent of this disease is commonly introduced into the United States through infected smuggled cage birds, particularly psittacine birds (parrot beak birds). Many of these birds are comparatively resistant, may be infected latently, and may shed the virus intermittently for long periods. Signs associated with disorders of the nervous system are seen commonly in these birds due to VVND infection.

b. Fowl plague

Fowl plague (European fowl pest) is a highly virulent disease of poultry caused by a particular serotype of avian influenza A virus. It causes very high acute mortality rates. The lesions are similar to VVND. The disease agent is highly contagious and strict quarantine and isolation procedures are necessary to prevent spread.

6. Foreign animal diseases

Present-day speed and magnitude of world traffic have multiplied the possibilities of foreign animal diseases entering the United States. EARLY DETECTION, CONTAINMENT, AND ERADICATION are essential to prevent widespread outbreaks with accompanying economic loss to the national economy. Export of animal products depends largely upon ability of the livestock and poultry industries to maintain a population free of the devastating diseases that rack a large segment of the world's animal population annually.

Many of these diseases cannot be accurately differentiated clinically from the enzootic diseases of the United States. Foot-and-mouth disease and vesicular stomatitis, African swine fever and hog cholera, rinderpest and virus diarrhea, fowl plague and Newcastle disease are examples of foreign and domestic diseases that are difficult to differentiate clinically. The United States Animal Health Association's Committee on Foreign Animal Diseases has published a report, FOREIGN ANIMAL DISEASES, Their Prevention, Diagnosis and Control, which describes the most important foreign animal diseases. This report, revised in 1975, may be obtained from the United States Animal Health Association, 6924 Lakeside Avenue, Suite 205, Richmond, VA 23228.

Veterinary practitioners are the first line of defense against establishment of a foreign animal disease in this country. Their responsibility to recognize and to report a suspected new disease entity is paramount to the success of maintaining healthy livestock and poultry populations. To assist practitioners in this area of responsibilty, Veterinary Services, APHIS, has strategically located veterinary diagnosticians specifically trained in diagnosis of foreign diseases. Each diagnostician is fully equipped to collect and submit selected specimens to designated laboratories.

Five Regional Emergency Animal Disease Eradication Organizations (READEO's) have been established, one in each Veterinary Services Region, to initiate immediate action in the event a foreign disease is diagnosed. These organizations through regular training and test exercises have developed the capability to mobilize equipment and

manpower rapidly to contain and eradicate a foreign animal disease outbreak. State Departments of Agriculture, Department of Defense, State Police, Extension Service, State Wildlife Agencies, universities, and other cooperating agencies are included in the Regional Emergency Animal Disease Eradication Organizations.

ALL SUSPECTED FOREIGN ANIMAL DISEASES SHOULD BE REPORTED IMMEDIATELY to State or Federal animal disease control officials to insure coordination of efforts among practitioners, diagnosticians and the laboratory. Constant vigilance and investigation are essential to prevent establishment of new diseases in the livestock and poultry population of the United States.

7. Hog cholera and swine health protection

Hog cholera is a highly fatal viral disease of swine that is reported to have originated in the United States and spread worldwide. The first documented report of the disease was in 1833. At the onset of the 1900's, the disease was reported to represent more than a $50 million death loss to the swine industry. Development of a method for vaccination early in the 1900's provided a method of hog cholera control. Despite advancements in vaccination procedures, hog cholera continued to represent a substantial loss to the swine industry, both in the form of death losses and cost of vaccination. At the onset of the State-Federal eradication program in 1962, hog cholera still represented a $50 million loss to the swine industry.

The national hog cholera eradication effort initiated in 1962 was a cooperative effort between the Federal Government and individual States. The plan provided phases to permit individual States to advance in the program within their legal and financial capabilities and the ability of the program to confine the disease within the State.

The last confirmed case occurred August 1, 1976, and the United States was declared hog cholera free on January 31, 1978.

Total State and Federal funds for the 16-year eradication program were $140 million; an estimated cost of $1.12 billion would have been generated to live with the disease for a similar time.

Surveillance within the United States will continue indefinitely due to worldwide distribution of hog cholera and the threat of reintroduction. It was at an especially high level for the 3 years following the attainment of free status and was increased recently due to the introduction of African

swine fever into Brazil and Caribbean nations. Surveillance takes the form of:

1. Investigating swine disease conditions reported as suspicious of hog cholera.

2. Routine screening of swine tissues for hog cholera that are submitted to diagnostic laboratories for any diagnostic determination.

3. Continuing inspection of swine garbage feeding operations for compliance with cooking requirements.

4. Complying with marketing requirements for swine moving back to farms.

Hog cholera is a prime consideration in the importation of swine, swine products and swine byproducts.

Airports, ocean ports, and land border ports are monitored continuously by agencies of the U.S. Department of Agriculture, Customs Service, and the Immigration and Naturalization Service to detect swine products that may be carried intentionally or unintentionally into the United States and with them exotic swine disease agents.

All swine disease conditions with signs or lesions compatible with hog cholera should be reported immediately by telephone to a State or Federal regulatory official.

D. Laboratory support in confirming disease diagnosis

1. National Veterinary Services Laboratories

The mission of the National Veterinary Services Laboratories (NVSL), of Ames, Iowa, is to provide laboratory support for the programs of Veterinary Services, which involves testing biological products and conducting diagnostic tests. Support services are provided in bacteriology, virology, histopathology, toxicology, chemistry, serology, parasitology, and clinical pathology.

Biological products of bacterial and viral origin produced by commercial companies are randomly selected and tested to assure efficacy, potency, safety, and purity. Assistance is provided to the Veterinary Biologics Staff by confirming experimental data submitted by licensees in support of their requests to license new biological products. New and improved test methods are developed to evaluate biologics as new products are produced and techniques improved. References and reagents are produced for NVSL and industry to use in their test systems.

Diagnostic testing is conducted in support of essentially all of the Veterinary Services disease control programs. A few examples are brucellosis, tuberculosis, scabies, and scrapie. Laboratory support for State-Federal Cooperative program activities is available from NVSL to accredited veterinarians after clearance with the Federal Veterinarian in Charge of their State. Details of specific tests or procedures used and how to obtain services are provided in the Diagnostic Reference Manual available from NVSL.

In addition to providing laboratory support for Veterinary Services programs, NVSL also:

-Produces and standardizes tests and reagents for the diagnosis of animal diseases and testing of veterinary biologics.

-Develops and carries out scientific training programs for State and Federal regulatory personnel, as well as foreign scientists, through formal courses and on-the-job training.

-Provides comprehensive differential diagnostic studies and field and laboratory investigations of exotic and enzootic animal disease outbreaks upon request from Veterinary Services field personnel, State diagnostic laboratories, university personnel, and foreign countries.

-Provides laboratory support in investigations of field problems related to the use of veterinary biologics.

-Provides automated systems for retrieval of data on disease surveillance, diagnostic activities, and biological testing.

-Provides laboratory tests used in certification of animals for import or export.

Laboratory support is also available locally. The Directory of Animal Disease Diagnostic Laboratories available from NVSL contains a complete listing of laboratories and services available.

2. Anthrax

Anthrax is a threat to the livestock industry of the United States, both from indigenous and foreign sources. Many States have specific regulations concerning the manner in which anthrax outbreaks should be handled. The outbreaks should be reported to State animal health officials.

When an indigenous source is involved, the usual situation is that cattle are pastured where there has been previous flooding and a kill of vegetation in which the grass has taken on a brownish tinge. The flooding is followed by a

period of drought. An alkaline or neutral soil or water source contributes. Anthrax outbreaks occurring on such pastures may be handled by moving the cattle from the pasture to another that does not have the same contributing environmental conditions. The surviving animals should be vaccinated. The carcasses of animals that have died of the disease should be buried deeply or burned on the spot. Environmental Protection Agency regulations should be consulted. When anthrax is suspected, carcasses should not be opened for post mortem examination.

For laboratory confirmation of deaths caused by anthrax, a superficial vein is opened and a specimen prepared by soaking a swab or a 2- to 3-inch piece of sterile umbilical tape or absorbent paper with the blood. The amount of blood should be small to allow quick drying. The specimen is dried in an open sterile screwcap test tube. The tube is then closed and placed in a double mailer, the inside container of which must be metal. Specimens may be sent by registered airmail to the National Veterinary Services Laboratories, Ames, Iowa, after clearance from the Federal Area Veterinarian in Charge, or a State diagnostic laboratory may be able to perform the necessary bacteriologic tests, animal inoculation, and phage typing. An excellent reference on the laboratory diagnosis of anthrax will be found in the Proceedings of the U.S. Livestock Sanitary Association, 63rd Annual Meeting, San Francisco (1959):399-405.

When anthrax outbreaks in animals have occurred in relation to imported animal byproducts, they usually were associated with contaminated nonsterile bonemeal mixed in animal feeds. Federal regulations covering importation of bonemeal specify that the product must be prepared by heating the bone under a minimum of 20 pounds steam pressure for at least 1 hour at a temperature of not less than 121 C. (250 F.) The product must be free from pieces of bone, hide, flesh, and sinew, and contain no more than traces of hair and wool. In all outbreaks of anthrax, an effort should be made to discover the source of infection. If contaminated feed is involved, an early determination of this fact may head off additional outbreaks.

Accredited veterinarians have a unique opportunity to provide authentic information concerning the hazards of anthrax and can help to alleviate the hysteria that sometimes accompanies anthrax outbreaks. Familiarity with the ecologic conditions which may lead to an anthrax outbreak will aid accredited veterinarians in recommendations regarding anthrax vaccination, thereby heading off potential anthrax losses. Veterinarians should be thoroughly familiar with any local or State regulations concerning vaccination for anthrax.

3. Bluetongue

Bluetongue is an infectious, noncontagious disease of ruminants occurring in sheep and cattle. The first isolation of bluetongue virus in the United States was made in California, in 1952; however, the disease was thought to exist in Texas as early as 1948 where it was known as "soremuzzle." Since 1952, bluetongue has been reported from 31 States: Alabama, Arizona, California, Colorado, Florida, Georgia, Idaho, Indiana, Iowa, Kansas, Kentucky, Louisiana, Minnesota, Mississippi, Missouri, Montana, Nebraska, Nevada, New Mexico, North Carolina, Ohio, Oklahoma, Oregon, South Dakota, Tennessee, Texas, Utah, Virginia, Washington, West Virginia, and Wyoming. Virus isolations have been made from cattle, sheep, or wildlife in each of these States except Virginia and West Virginia. Four immunolgic types of bluetongue virus have been isolated from sheep and cattle in field outbreaks. These have been identified by the International Typing Center at Onderstepoort, South Africa, as International Types 10, 11, 13, and 17. A very similar viral disease, epizootic hemorrhagic disease, affects cattle and deer; however, it is difficult to infect sheep with this viral agent, a different and distinct virus from bluetongue. Dual infections with bluetongue and epizootic hemorrhagic disease can occur in cattle and deer. The principal insect vector of these viruses in the United States is Culicoides variipennis

The signs of bluetongue in sheep consist of fever, lassitude, nasal discharge, salivation, edema of the lips and head, hyperemia and cyanosis of the buccal mucosa, followed by ulceration and necrosis, hyperemia of the coronary band, lameness, and bloody diarrhea. In cattle, the disease may be an inapparent infection or produce signs as severe as those observed in sheep. Intrauterine infection of the fetus can cause losses in calves and lambs. Bluetongue can and does cause severe losses in individually infected flocks and herds; however, other major losses to the U.S. cattle and sheep industry are the difficulty in certifying animals for export to certain countries and the barrier to our export market in others.

When bluetongue is suspected, animal health officials should be notified. They will assist in submitting samples to the National Veterinary Services Laboratories, Ames, Iowa, for virus isolation studies and serologic tests. Blood collected for these studies should be obtained from animals in early stages of the disease if possible-preferably those with high fevers.

Good nursing care is the only form of treatment available for bluetongue. Vaccines have been developed and used against bluetongue in sheep. The virus is attenuated by two methods:

(1) chicken embryo passage (CEO) and (2) chicken embryo passage followed by tissue culture passage (TCO). Only TCO vaccine produced from one serotype is available currently. This vaccine appears to provide good immunity against the homologus serotype but poor or no immunity against heterologous serotypes. A CEO product was available in the United States; however, it produced undesirable side effects and could be transmitted by the vector as a virulent virus to susceptible animals.

4. Contagious equine metritis

Contagious equine metritis (CEM) is a disease of horses and other equidae, confirmed in Thoroughbred horses as a new entity in June 1977. The bacterial agent is highly transmissible venereally. Previously unrecognized, CEM has spread internationally since 1975 with the following countries involved: France, Ireland, England, Australia, Belguim, West Germany, Japan, Italy, and the United States. CEM is characterized in mares by a mucopurulent vaginal discharge and lowered reproductive efficiency. In stallions, clinical signs are not seen. Severity may vary from acute to chronic.

a. Etiologic agent

The agent of CEM is an unclassified coccobacillary bacterium which is microaerophilic, gram negative, and non-motile. This bacterium is similar, but not identical, to certain Hemophilus species. In Kentucky, it was first recognized that two strains exist: (1) streptomycin sensitive, and (2) streptomycin resistant.

b. Clinical signs

Available evidence indicates that stallions are contaminated, but not truly infected, by the CEM organism, as demonstrated by positive culture from the penis and/or prepuce, followed by treatments (washing and packing with antibacterial agents). With subsequent return of the subject stallion to service on numerous mares, however, there was no evidence of CEM.

Mares infected with the CEM organism usually return to estrus after an abbreviated diestrous period. A mucopurulent discharge occurs 2-10 days after being bred. Certain mares have been reported pregnant 35 days after being served by the stallion and subsequently have not been found to be pregnant at 60 days.

Certain infected mares may have no clinical signs (inapparent infection carriers) and certain mares can carry a fetus to term.

c. Diagnosis

Clinical signs in an individual mare or in many mares bred sequentially by a contaminated stallion (about 70 percent of such mares commonly have been observed to show clinical signs) are usually the first diagnostic clues.

Confirmation of CEM is carried out by bacteriologic culturing. The cervix (or uterus) is the ideal location from which to obtain specimens in active cases of CEM; the causative agent is present in large numbers, and there are fewer contaminating bacteria at this site. In mares not showing clinical signs, cultures should be made from specimens collected from the cervix (or uterus), clitoral fossa, and clitoral sinuses. Such specimens should be collected while the mares are in estrus, preferably during the first part of the heat period. The CEM organism appears to increase at this time, while the contaminating bacteria seem to decrease. In stallions, urethra, urethral fossa, fossa glandis, and sheath should be examined by bacteriologic culturing. Contaminating organisms are frequently a problem in stallions, making isolation of the CEM bacterium difficult, or in most instances, impossible when antibiotics are not used in the chocolate agar plates. It is best to breed suspect stallions to test mares and culture specimens from the test mares for the CEM bacterium.

Swabs should be placed immediately in transport medium. Both Stuart's and Amie's transport media have been used successfully, but the latter appears to be superior in that the CEM bacterium lives longer. The transport medium should be held at 4 C. or kept on ice and transported to the laboratory as soon as possible. The transport medium also may be frozen and transported cold (with dry ice) if samples cannot be delivered immediately to the laboratory. It is important not to add any inhibitors or antibiotics to the transport medium.

In Kentucky, the complement-fixation (CF) test has been used as a screening method to aid in diagnosis of CEM. CF antibodies are at measurable levels in acute and early convalescent phases (15-40 days after introduction of infection) of CEM. A CF antibody profile in a group of mares bred by one stallion can lead diagnosticians to infected mares (to be confirmed by positive culture) or a contaminated stallion (to be confirmed by positive culture or test breeding, or both, with a positive culture disclosed in the test trial candidate mare). Thus, CF testing is a screening procedure and should not be used to replace bacteriologic culturing to confirm CEM since it has limited value on any individual animal.

d. Epidemiologic considerations

CEM usually is introduced into a farm by an inapparent CEM carrier mare or stallion (all "infected" stallions are considered as inapparent CEM carriers). Transmission occurs primarly during copulation. However, the infective agent also can be spread mechanically as a result of poor hygienic practices in breeding sheds or by using contaminated equipment among animals during genital examinations.

The disease is usually first recognized when about 70 percent of the mares bred to an infected stallion show clinical signs of CEM (profuse vaginal discharge 2-10 days after breeding and a shortened diestrous period). CEM is spread between States, territories, and nations in a manner similar to interfarm spread.

e. Economic impact

Any venereal disease that causes a lowered conception rate or early abortion obviously will result in measurably lowered reproductive efficiency. In Newmarket, England, in 1977 percentage of mares "in foal" was reported to have dropped from 80 percent to 42 percent due to CEM, combined with cessation of breeding during the pioneering period when scientists were unraveling the secrets of the disease. Estimated losses were approximately $30 million.

f. Control

Considering that the diagnostic tools lack precision, emphasis must be placed on preventing spread of this agent. Breeding moratoriums and quarantines are considered by many to be severe measures to use on a mobile and seasonal breeding population such as Thoroughbreds. However, history tells us that these measures have proven worthwhile in assisting horse owners, clinical veterinarians, farm managers, and animal health regulatory officials in stopping the spread of CEM within the area.

Preventing spread of CEM is the key to its control. The following actions are necessary:

1. Designation of CEM as a reportable disease.

2. Quarantine and surveillance of infected and exposed horses.

3. A moratorium on breeding to clearly define the total problem of CEM within a horse population.

4. Identification of satisfactory medications and methods for treating infected animals.

5. Education of breeding farm personnel concerning methods of transmission.

g. Treatment

Early clinical experience with CEM indicates that about 10 percent of infected mares seem to remain carriers of the agent regardless of any medication that they may have received. However, thorough scrubbing of the erect penis and sheath of stallions every day for 5 days with chlorhexidine, followed by coating with nitrofurazone ointment, has resulted in elimination of the CEM organism. Five previously infected stallions in Kentucky were "cleaned" using this technique, and we have been advised of several stallions in Europe that were similarly cleared of the disease agent. It should be recognized that treatment of stallions and mares has not been conducted under controlled conditions; hence, the above-mentioned observations are strictly field experiences and need to be duplicated through research work.

h. Other breeds

Recently, CEM was reported in France among Standardbred and Saddlebred breeding animals. These are the first reports of CEM in horses other than Thoroughbreds. Additionally, experimental infection of ponies has been carried out. Therefore, it is reasonable to assume that all breeds of horses are susceptible to CEM.

5. Dourine

Dourine, or suspected dourine, should be report promptly to animal health officials. Veterinarians should be prepared to collect blood samples from suspected equidae so that animal health authorities can forward preserved serum samples to the National Veterinary Services Laboratories, USDA, Ames, Iowa 50010, for laboratory assistance in diagnosis, using the complement-fixation test.

6. Equine babesiasis/ equine piro-plasmosis (EP)

The first known case of equine babesiasis in the United States was diagnosed in 1961 in Florida. Neither the date nor mode of entry into the country is known. In the United States, equine piroplasmosis (EP) of the Babesia caballi type is known to be endemic in Puerto Rico, the U.S. Virgin Islands, and southern Florida (Florida has an EP control program). Also, confirmed cases of EP have been reported in Arizona, Arkansas, Georgia, Minnesota, Mississippi, Nebraska, New Jersey, New York, North Carolina, South Dakota, and Tennessee. These cases were shown to have originated from EP

endemic areas of the world. The disease is caused by the protozoa Babesia caballi and B. equi which invade red blood cells of solipeds. B. caballi is considered to be less pathogenic than B. equi. Worldwide, 15 species of ticks are incriminated or proven vectors of equine babesiasis. At least two of them are found in the United States - the brown dog tick, Rhipicephalus sanguineus, and the tropical horse tick, Dermacentor nitens . The complement-fixation (CF) test for babesiasis is recognized as a practical laboratory aid to diagnosis. A less practical aid to diagnosis is demonstration of protozoa in red blood cells. Protozoa are most common 2 to 5 days after appearance of clinical signs. Differential diagnosis is further complicated by the fact that equine babesiasis is clinically indistinguishable from equine infectious anemia (EIA) .

Veterinarians should be alert to cases of sick horses. When equine babesiasis or EIA is suspected, Federal or State animal health officials should be notified immediately. Accredited veterinarians should be acquainted with the technique of diagnosis of equine babesiasis, using the CF test. This information is available on request from Federal or State animal health officials. Ticks found on infected animals should be collected and forwarded to the National Veterinary Services Laboratories, USDA, Ames, Iowa 50010 for identification.

7. Equine viral encephalo-myelitis

Three types of viral encephalomyelitis affect horses and other equidae in the United States; namely, eastern (EEE), western (WEE), and Venezuelan (VEE). These three entities also may pose a public health problem when viral activity reaches a certain level. The epizootic Venezuelan virus was only reported in the United States in 1971 in Texas. The eastern and western types have been reported from many areas of the United States for at least 45 years. In epizootic Venezuelan encephalomyelitis outbreaks, horses and other equidae are considered major amplifiers of the virus; whereas in the eastern and western types equidae are considered "dead-end" hosts.

It is impossible to differentiate among EEE, WEE, and VEE in equidae by clinicl signs. The disease must have laboratory confirmation of suspected cases for differential diagnosis.

Outbreaks of these viral encephalitides can be controlled using the following methods:

1. Protection of individual horses and other equidae through vaccination.

2. Mosquito control.

3. Controlling movement of horses and other equidae from outbreak areas.

Any horse or other equidae suspected of viral encephalomyelitis should be reported to State-Federal animal health officials.

The U.S. Department of Agriculture carries out an active program of promoting vaccination of equine against EEE, WEE, and VEE; conducts laboratory tests on all suspicious cases of equine encephalitis to determine whether the virus involved is eastern, western, or Venezuelan; maintains close liaison with the United States and individual State public health services; and collects mosquitoes and samples from wild animals for virus assay.

8. Leptospirosis

Leptospirosis is caused by any of more than 100 serotypes of Leptospira interrogans. All mammals, including man, are susceptible to leptospirosis. It is worldwide in distribution and is common in wildlife. Wild animals pose a threat to domestic animals as a potential reservoir for recurring outbreaks. Although eradication of leptospirosis is not probable with the tools now available, the disease can be controlled well by proper use of available bacterins. Chemotherapy also is effective in many instances. Effective sanitation and rodent control are indispensable when handling outbreaks. An infectious disease, leptospirosis, comes under Federal and State laws and regulations prohibiting the interstate movement of affected animals.

Blood tests for leptospirosis, offered as a service by many State laboratories, have been an effective aid in leptospirosis control. Because this disease frequently resembles brucellosis in cattle and swine, it is very important to check for both when you investigate outbreaks in which abortion is reported. Veterinary Services activities related to leptospirosis are limited at present to diagnostic serology in selected locations.

9. Other infectious diseases

Federal law prohibits interstate movement of animals affected with infectious or communicable diseases.

Alert private practicing veterinarians are an indispensable line of defense against exotic diseases, which could cause devastating plagues among our livestock. Certain infectious diseases endemic to the United States may appear clinically similar to diseases such as rinderpest and contagious pleuropneumonia. Early recognition and diagnosis of a mucosal disease is especially important because such a disease may closely resemble an exotic disease. Any disease condition that could conceivably be of foreign origin should

be reported immediately to State or Federal animal health authorities. Specially trained foreign animal disease diagnosticians are available to aid in diagnosis of all outbreaks of diseases and should be called upon to investigate any suspected reportable or foreign animal disease.

E. Disease and parasite eradication programs

1. Bovine tuberculosis eradication

a. The program

The cooperative State-Federal bovine tuberculosis eradication program began in 1917. At that time, tuberculosis caused more losses among farm animals than any other infectious disease. Economic losses to farmers, stockyards, packers, and transportation agencies, as well as the dangers to human health, led to demands for an organized program to eradicate the disease. The program was established with the long-range objective of total eradication of bovine tuberculosis from the Nation's livestock. To obtain this objective, procedures were adopted as follows:

1. All cattle were to be tuberculin tested every 6 years.

2. All reactors to the tuberculin test were to be slaughtered and subjected to necropsy.

3. All infected premises were to be cleaned and disinfected.

4. Animal movements were to be traced into and from infected herds to determine where the infection orginated and where it may have spread.

When an area succeeded in reducing the reactor rate among cattle to less than 0.5 percent, it was to be designated as a modified accredited area. Through diligent application of the procedures adopted, all counties in the United States attained this status by 1940. The prevalence of bovine tuberculosis was reduced from approximately 5 percent to less than 0.5 percent. In some areas, infection had been over 5.0 percent. In 1979, the infection rate as measured by the tuberculin test was less than 0.3 percent. Prevalence of the disease, as measured by the number of carcasses showing lesions of tuberculosis at the time of regular slaughter (excluding reactors), was reduced from 2,100 per 100,000 cattle slaughtered under Federal meat inspection in 1917 to less than 0.3 per 100,000 cattle slaughtered under Federal inspection in 1979.

When the country was first designated as modified accredited in 1940, this led to the belief that the objective had been reached and tuberculosis had been eliminated from the cattle population. Despite vigorous application of established procedures since the beginning of the program, tuberculosis has not been eradicated. The disease occurs in all sections of the country. Foci of infection are monitored constantly by the tuberculin test and by traceback to herds of origin of cattle found to have lesions of tuberculosis at time of regular kill. Federal regulations concerning bovine tuberculosis eradication are found in the Code of Federal Regulations, Title 9, Chapter I, Subchapter B, Part 50, and Subchapter C, Parts 71 and 77.

The tuberculosis eradication program in each State is conducted under the laws and regulations of that State. The uniform Methods and Rules-Bovine Tuberculosis Eradication are used as a guide. These methods and rules are adopted by the United States Animal Health Association (USAHA) and approved by Veterinary Services, APHIS, USDA. Amendments to these methods and rules are considered by the USAHA annually. Additional measures to achieve tuberculosis eradication are added to the program as they become necessary. The current program includes use of post-mortem findings by meat inspection. Stress is being placed on tracing animals which show lesions of tuberculosis at time of slaughter to their herds of origin, locating origin of reactors, and followup of exposed animals that were removed from infected herds before the animals were found to be infected. Emphasis is placed on liquidating herds with known Mycobacterium bovis infection. The provision for Federal endemnity payments for exposed animals when the entire infected herd is slaughtered has been available since 1963. This permits liquidation of nonreacting animals to the tuberculin test in a herd when it has been determined that liquidation of the entire herd will contribute to the tuberculosis eradication program. Provision is made also for destruction with Federal indemnity of certain specified exposed animals such as calves nursing reactor dams and cattle sold from known M. bovis herds before detection of the infection.

b. Services of accredited veterinarians

Accredited veterinarians are an intrinsic important part of the tuberculosis eradication program and contribute to the eradication effort while providing professional services to the client. Clients depend on advice of accredited veterinarians regarding prevention and

eradication of the disease on a farm basis. State and Federal animal disease control officials depend on accredited veterinarians for surveying herds and areas for tuberculosis, for reporting responses to the caudal fold tuberculin test, and for informing clients about tuberculosis and the eradication program.

Accredited veterinarians are expected to know the laws and regulations of the State regarding tuberculosis and to be thoroughly familiar with the eradication program. They must be able to:

1. Accurately inform herd owners about the program and the disease.

2. Accurately identify all herds and animals tuberculin tested and make complete records on standard forms regardless of reason for the test.

3. Accurately record tuberculin test information and animal identity on Interstate Health Certificates when certifying animals for such movement.

4. Make test readings on the proper reading date (72 hours after injection) in accordance with the Uniform Methods Rules--Bovine Tuberculosis Eradication.

5. Record on the test chart results of retesting with the comparative-cervical test and, for future epidemiologic purposes, ALL responses or deviations from normal that are observed while reading the test regardless of the classification of the animal as Reactor, or Suspect. Promptly notify State-Federal veterinarians by telephone of such responding animals.

6. Tag, brand, and appraise reactors.

7. When necessary, issue forms such as quarantine notices and permits for movement of reactors to slaughter.

8. Instruct owners concerning disinfection of premises.

9. Inform owners about indemnity payments.

10. Instruct owners about management practices aimed at avoiding recurrence of the disease.

11. Leave copies of test reports with owners.

12. Make an honest concerted effort to obtain herd histories, particularly as they relate to animal movements into and out of infected herds, and promptly report such information.

13. Submit promptly all test reports and allied or supporting papers to the State-Federal Cooperative Program Office.

14. Seek assistance from State and Federal veterinarians when in doubt about any phase of the program.

c. The tuberculin test

Restraint - Each animal must be restrained effectively by nose lead or other means. A good injection is imperative. This is impossible if an animal moves when the needle is inserted. Nose leads should be washed thoroughly in disinfectant solution between animals.

Injection site - The site is the skin of the caudal fold at a point two-thirds of the distance from the base of the tail to the end of the fold. Either side may be used. It is advisable, however, to use the same side habitually.

Before the injection is made, the caudal fold is examined for abnormalities that might confuse obervations. These are noted and indicated to the owner.

The site is cleaned with dry cotton. Strong disinfectants may cause irritation and confuse test interpretations.

Injection technique - Before use, the syringe is checked for leakage, needle gauge, and exposure, and adjustment for delivery of accurate tuberculin dosage. The tuberculin dosage is 0.1 cc.

In filling the syringe, air bubbles should be eliminated. An accurate test reading requires a careful injection. The 26 gauge, 3/8-inch needle is inserted between the the layers of skin, then withdrawn slightly. The injection should be intradermal, never subcutaneous. The needle is cleaned with cotton moistened with alcohol between each injection. Permit the alcohol to dry before making an injection.

Observation of test - Observations are made 72 hours after injection plus or minus 6 hours. The eartag or tattoo is to be read at the time of observation. The animals must be so restrained that the injection site can be both observed visually and palpated. Visual

observation alone is an improper and unacceptable procedure and will result in loss of accreditation.

Failure to observe and palpate every animal, as well as hurried and careless interpretations, will cause tuberculosis to be missed, bringing discredit to the veterinary profession and doing a disservice to the herd owner.

Interpretation and classification - Tissue disturbance at the injection site may vary from barely perceptible to a swelling the size of a fist. It may be hard and circumscribed, or soft and infiltrated with no distinct line of demarcation. There is no type that is characteristic of M. bovis infection.

Size, shape, and appearance of the tissue response do not reflect the degree of infection. Therefore, all deviations from normal in the test site noted by the veterinarian when reading the test must be recorded on the test charts and reported to State-Federal program officials. Unless the herd being tested is at high risk of being infected, all animals with tuberculin response should be classified as suspect and reported immediately to regulatory officials so a comparative-cervical test can be conducted.

d. Recording and reporting responses

Official Caudal Fold Tuberculin Test: All responses shall be recorded in millimeters of induration and the animal classified as suspect and quarantined for retest, unless, in the professional judgment of the testing veterinarian, the reactor classification is indicated. All tuberculin tests are official tests.

(2) The Suspect ("S") Classification

This is a broad classification. It is to be used for animals showing a response to tuberculin which, in the professional judgment of the testing veterinarian, should not be classified as reacters, but shall be retested by a regulatory veterinarian with the comparative-cervical test either within 10 days or after 60 days. State-Federal veterinarians will be notified by telephone immediately of any animals so classified.

(3) The Reactor (R") classification

Animals showing any response to tuberculin on a caudal fold test may be classified as reactors if, in the professional judgment of the testing veterinarian, such classification is justified.

2. Brucellosis eradication

a. The program

Eradication of brucellosis from all species of domestic livestock is a cooperative program between the States and the Federal Government, conducted under the laws and regulations of the individual States and Veterinary Services. The Federal Government cooperates with the States through memorandums of understanding under authority of specific Federal laws relating to animal diseases. The Uniform Methods and Rules, Brucellosis Eradication, are the minimum standards for establishing and maintaining certified and validated herds and areas leading to total eradication of brucellosis from the entire Nation. The Uniform Methods and Rules are adopted by the United States Animal Health Association (USAHA) and approved by the Animal and Plant Health Inspection Service, U.S. Department of Agricultue. Amendments to the Uniform Methods and Rules are considered at annual meetings of the USAHA.

b. Interstate movement of animals as related to the brucellosis program

Veterinary Services has primary responsibility for control of interstate movements of animals. Federal regulations, promulgated by the Department, set forth the provisions under which animals may be transported interstate. The regulations are promulgated under authority of the basic Federal laws concerned with animal disease control and eradication activities. These laws also provide the Department with authority to contract for services of accredited veterinarians to assist in the brucellosis eradication program.

Accredited veterinarians should be familiar with Federal regulations pertinent to the brucellosis eradication program whether or not they participate directly. As a service to their clients, most of them will be issuing official documents and performing other services required by the regulations.

c. Specific Federal regulations related to the program

Applicable regulations will be found in the Code of Federal Regulations (CFR), Title 9, Chapter I, Subchapter B, Part 51, and Subchapter C, Parts 71 and 78.
Part 51 sets forth provisions under which indemnities may be paid for animals destroyed because of brucellosis.

Part 71 includes general provisions for interstate transportation and identification of animals, including instructions for cleaning and disinfecting vehicles, yards, premises, and such, and permitted disinfectants to be used.

Part 78 is specifically related to brucellosis, setting forth in detail provisions under which animals may or may not be moved interstate.

d. Amendments to the Federal regulations

Federal regulations are amended at frequent intervals as the need arises. Amendments appear in the Federal Register, published by the Office of the Federal Register, National Archives and Records Service, General Services Administration. The Register is distributed by the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402. Copies of the regulations and recent amendments are available from the Federal Area Veterinarian in Charge, Veterinary Services, in the various States.

e. Specifically approved market--certified areas

Part 78 is particularly important in that it lists livestock markets and slaughtering establishments that are specifically approved to receive animals moving interstate under provisions of the brucellosis regulations. Also, it lists the States and counties that have achieved status as Modified Certified Brucellosis Areas as well as Certified Free Areas under the Cooperative State-Federal Brucellosis Eradication Program. Periodically, accredited veterinarians should obtain updated information from the Federal Area Veterinarian as the above terminology is subject to change.

f. History of brucellosis eradication

The Cooperative State-Federal Brucellosis Eradication Program began in 1934 as a drought relief program. Most States participated from the start. At that time, the

program was based on the blood-serum agglutination test of cattle, with elimination of reactors. By this method alone, the animal infection rate was reduced in participating areas from 11.5 percent in 1935 to 2.5 percent in 1939. Since that time, research and field trials have provided several additional measures that have proved to be effective in the eradication program.

Strain 19 Vaccine--Department of Agriculture scientists developed Strain 19 vaccine to be used against brucellosis. The vaccine was introduced into the official program in 1941, and has proved to be a valuable adjunct to the other procedures included in the program. Research trials over the years and extensive field surveys have established the efficacy of the vaccine. Approximately 65 percent of the cattle properly vaccinated with Strain 19 develop serviceable resistance against later exposures with infective doses of Brucella. This level of herd immunity, while not ideal, provides a satisfactory means for controlling spread of brucellosis within infected herds. Consequently, vaccination with Strain 19 should be practiced in all areas where brucellosis is prevalent or when the livestock owner anticipates marketing surplus heifers and cows in areas where brucellosis is prevalent. Livestock owners receiving purchased additions from areas where brucellosis is common should also continue a vaccination program in their herds.

The merits of the vaccine have been proved, but its limitations relative to the total eradication program must be kept in mind. Most cattle properly vaccinated between the ages of 2 and 6 months with the standard dose of Strain 19 rarely are found to retain a titer for more than 4 to 6 months. Residual vaccinal antibody titers tend to persist into adulthood in some calves that are vaccinated between the ages of 6 to 10 months with the standard vaccine. As a result, a reduced dosage vaccine has been made available for use in certain States. The reduced dosage will contain between 3×10^8 and 3×10^9 viable Brucella abortus Strain 19 organisms. The standard vaccine dosage contains between 25×10^9 to 10×10^{10} viable organisms. The age for vaccinating calves of all breeds when using the reduced dosage vaccine is 4 to 12 months. When using the standard dosage vaccine, dairy calves between the ages of 2 to 6 months and beef calves between the ages of 2 to 10 months may be inoculated. Interference of persisting vaccinal reactions in diagnostic tests can be nearly eliminated by vaccinating animals as soon as possible after the animals reach 4 months of age. Vaccination of 4-month old calves

provides the same level of resistance against later infection as found among animals vaccinated at sexual maturity. Although vaccination can assist in controlling spread of brucellosis, it does not provide sufficient resistance to cause eradication of brucellosis. In fact, there is relatively little change in overall herd infection rates for vaccinated versus nonvaccinated populations, but the animal infection rates are greatly reduced.

Milk Ring Test - In 1952, the milk ring test was approved and became a vital phase of the brucellosis eradication program. All commercial dairy herds in the United States are screened three to four times annually by this method. Eradication efforts are concentrated in those that are identified as suspicious from the results of this test. A suspicious ring reaction is presumptive evidence of Brucella infection and is followed by a herd blood test. The test is remarkably specific; a rate of approximately two-tenths of 1 percent suspicious tests is now common in many States. Thus, more than 99 percent of the blood testing of dairy herds that would otherwise be necessary has been eliminated in these States. As time permits, those few herds that are persistently classified as suspicious by the milk ring test, but do not reveal blood test reactors, are the object of further investigations as to the cause.

Market Cattle Tests - A major screening program utilized in brucellosis eradication is market cattle identification.

Introduced in 1959, this procedure involves testing, at market centers and slaughtering establishments, of cows that are not adequately screened by the brucellosis milk ring test (BRT). Reactor animals are traced to herds of origin, and the complete herd is placed on an individual animal testing program. The market cattle program is contributing materially to brucellosis eradication in most sections of the country. Its universal adoption is anticipated since this will provide the frequency of screening necessary to disclose most outbreaks of brucellosis in beef cattle and thereby helps assure eradication. In addition, continuation of the milk ring test and the market cattle testing program in those areas already free of brucellosis will provide a relatively inexpensive surveillance program.

Market Swine Testing - This surveillance system in swine, which is analogous to Market Cattle Testing in the bovine brucellosis program, was initiated in the late

1960's. Sows and boars are tested for brucellosis at markets and slaughter plants and those that react are traced and the herd of origin tested. Herds found to be infected are freed of the disease by testing or, preferably, by marketing the entire herd to slaughter. Boars are important considerations in the epidemiology of swine brucellosis since they are commonly associated with the spread of infection within and between herds.

Epidemiologic Investigations - As the goal of eradication is approached, it has become evident that special epidemiologic methods (utilizing supplemental testing procedures) would be necessary in problem herds to remove the last vestiges of infection. Trained epidemiologists are available in most States to conduct such work, utilizing all of the known special methods and procedures as an aid in conducting a complete epidemiologic investigation in the very limited number of remaining problem herds.

g. Eradication, the goal

The importance of carrying out the above-mentioned procedures on an area basis cannot be overemphasized. The goal of area, State, and nationwide certification (cattle) and validation (swine) can be attained only when recommended procedures are applied uniformly to all herds within all areas. Certification and validation of areas are important steps in the overall program to eradicate brucellosis. Without organized area effort and wholehearted participation of all herd owners, veterinarians, and others involved in the program, gains already made will be difficult to maintain, and the goal of eradication of brucellosis will be delayed.

h. Participation of accredited veterinarians

Many accredited veterinarians will be participating in some part of the brucellosis eradication program before its completion. They will perform the following services:

-Provide herd owners and other interested parties with facts concerning the brucellosis eradication program and about the disease itself.

-obtain blood samples and otherwise perform professional services promptly when requested by owners and authorized by animal health officials.

-Prepare in detail and submit accurate test record charts, including identification of animals, estimated age, pertinent history, vaccination record, and other information required.

-Promptly tag, brand, and appraise all reactors as authorized. Indemnity claims constitute a legal and binding contract when approved, and the importance of accurate and full information cannot be overemphasized.

-Instruct owners of infected animals as to isolation and proper disposal of reactors, quarantine, shipping permits, cleaning and disinfection of premises and equipment, indemnity claims, and management practices to prevent recurrence of the disease.

-Retest infected herds promptly as authorized by program officials. The owner's initial investment in disease eradication may be lost by an unduly delayed retest.

-Where vaccination is practiced, maintain stocks of Strain 19 vaccine in such a manner as to assure their potency when administered.

-Where vaccination is practiced, vaccinate cattle at recommended ages, accurately identify them, and promptly report all vaccinations to State or Federal officials. If the tattoo is used, the accredited veterinarian is expected to utilize techniques that will assure legibility.

i. Some suggested techniques in brucellosis testing

1. Draw blood carefully so as to minimize contamination. Fill tubes about half full and allow to stand at room temperature until firmly clotted (2 or 3 hours), then cool or refrigerate (do not freeze).

2. Identify tubes in accordance with instructions. Examine the stopper to assure firm fit and absence of leakage; carefully pack tubes as directed to prevent breakage.

3. Provide a separate sterile needle for each animal tested. Nose tongs should be disinfected between animals.

4. The following table is used in classifying cattle tested by the standard tube test (STT) or standard plate test (SPT), except as noted in paragraph 6, below.

Official Vaccinates				All Other			
1/50	1/100	1/200	Result	1/50	1/100	1/200	Result
-	-	-	Negative	-	-	-	Negative
I	-	-	Negative	I	-	-	Suspect
+	-	-	Negative	+	-	-	Suspect
+	I	-	Suspect	+	I	-	Suspect
+	+	-	Suspect	+	+	-	Reactor
+	+	I	Suspect	+	+	I	Reactor
+	+	+	Reactor	+	+	+	Reactor

+ = most cells agglutinated,
I = intermediate agglutination,
- = no agglutination.

5. Under the Uniform Methods and Rules for Brucellosis Eradication, officially vaccinated female dairy cattle 20 month of age and older, and officially vaccinated female cattle of the beef breeds 24 months of age and older shall be blood tested.

6. Cattle classified as suspects according to the above table that have a history of abortion may be designated reactors, if they are in a herd containing reactors. If the Veterinarian in Charge approves such designation, these cattle may be eligible for indemnity in States where State or Federal indemnity is paid.

7. Swine are classified according to the following criteria:

   a. Card test - Card test results are classified as either negative or positive.

   b. Standard tube test - The blood titer of swine tested by the STT method are classified by use of the following:

If all of the following apply:	If one or more of the following apply:
(1) No animals on test with titers greater than I1/100,	(1) One or more animals on test with titer greater than I1/100,
(2) Not a retest of an infected herd, and	(2) Retest of an infected herd, or
(3) Complete herd test or incomplete test of a validated herd.	(3) Incomplete test of a herd of unknown status.

Then use the following:				Then use the following:			
1/25	1/50	1/100		1/25	1/50	1/100	
I	-	-	NEGATIVE	I	-	-	NEGATIVE
+	-	-	NEGATIVE	+	-	-	REACTOR
+	I	-	NEGATIVE	+	I	-	REACTOR
+	+	-	NEGATIVE	+	+	-	REACTOR
+	+	I	NEGATIVE	+	+	I	REACTOR

3. Cattle fever tick eradication

The cattle tick eradication program is designed to eliminate the vector for bovine piroplasmosis. The program was initiated in 1906, after establishment in 1889 of the role of the Boophilus tick as the vector. Incentive for the program was the annual loss of $40 million from piroplasmosis before 1906 and interference of the disease with establishing and developing a viable cattle industry in the South.

Piroplasmosis had been a problem in this country, and there are reports of losses in Pennsylvania as early as 1796. The Colonies passed laws with respect to control of cattle fever--South Carolina in 1744 and North Carolina in 1766.

A quarantine line was established July 3, 1889. The program for eradication began in 1906. At the outset, 985 counties in 15 States were under quarantine.

The program made use of various means to free cattle of ticks. These included manual removal of ticks, sulfur dips, crude oil dips and washes, carbolic acid washes, tobacco extract, sodium sulphate, glycerin, cottonseed oil, and other chemicals. Arsenic in the form of a dip made of arsenic trioxide, sal soda, and pine tar was recognized officially for dipping ticky cattle in 1910. It remained the official dip until the cattle fever tick had been eradicated. At present, the official list contains proprietary brands of arsenical dip, coumaphos, dioxathion, and toxaphene.

Infestation is determined by identification of the tick. Exposure is determined from a study of animal movements.

Quarantines are placed on all infested, exposed, and adjacent premises.

Bovine piroplasmosis has been caused in the United States by Babesia bigemina and Babesia argentina. All breeds of cattle and buffalo are susceptible.

The incubation period is 15 to 25 days. The signs are fever, lassitude, anorexia, and hyperemic mucous membranes followed by anemia and icterus, rumen atony, hemoglobinuria, and constipation or diarrhea. Death may occur in as little as 2 days; recovery from signs may occur in 2 weeks, but restoration of blood takes more than 2 months. Mortality rate ranges from 30 percent to 40 percent. Immunity is nonsterile.

Babesia bigemina and Babesia argentina are transmitted by eight species of ticks of which only two, Boophilus annulatus and B. microplus, are found in the United States. They are found also in Africa, Asia, Australia, Central America, Mexico, South America, and the West Indies.

Boophilus spp. ticks are one-host ticks. The primary host is domestic cattle. Hosts of lesser significance include horses, goats, sheep, and deer. Boophilus ticks go through the larval, nymphal, and adult stages on a single host. The parasitic period ranges from 18 to 66 days, but is usually 21 to 23 days. The nonparasitic period ranges from 28 to 279 days and is determined by degree days. The average number of eggs is about 3,500. Ticks are spread most commonly by movement of infested animals but also may be spread through movement of feedstuffs or bedding. Infestation is recognized by identification of ticks collected from animal hosts. Ticks may be destroyed by dipping or spraying of the host with permitted chlorinated hydrocarbon, organophosphorus, or inorganic pesticides.

Piroplasmosis is transmitted by infected ticks. Infection is maintained in ticks by transovarian transmission of the Babesia. Diagnosis of piroplasmosis may be confirmed by recognition of the parasite in a blood film or by serologic tests--complement-fixation, indirect hemagglutination, or precipitin. Piroplasmosis responds to treatment with trypan blue, quinuronium derivatives, acridine derivatives, and aromatic diamidines.

Amblyomma variegatum, the tropical bont tick, a three-host tick, was discovered in Puerto Rico in 1976. This tick,

which takes advantage of many different hosts, is capable of being a vector for viruses, bacteria, rickettsiae, and protozoa. It appears to trigger streptothricosis on cattle in Puerto Rico. This is a large tick; an engorged female was 33 mm long, 18 mm broad, and 15 mm in height. It is capable of laying 20,000 eggs.

The frequency of treatment must be greater than for one host ticks. The adult female remains on the host for as little as 8 days before dropping off fully engorged.

4. Scabies eradication

Scabies (and mange) is very old. Nearly 300 years ago, Italian scientists Bonomo and Cestoni reported work on the relationships of scabies mites to the disease. It is a contagious skin disease caused by Psoroptes bovis, Chorioptes bovis, Sarcoptes scabei, Demodex folliculorum, and Psorergates bos mites. Scabies and mange may occur at any time of year. They are transmitted by contact either directly with an infected animal or indirectly by contact with contaminated fences, vehicles, or equipment. Psoroptic mites can be transferred from cattle to sheep or vice versa in the laboratory. This proved to be no problem in the field. The life cycle for the psoroptic mite is egg to egg in 10 days. All animals are susceptible to scabies and mange. There is no immunity following infection.

Diagnosis is made by visual examination of scrapings taken from lesions. Mites collected are morphologically identical, regardless of type of host. The psoroptic mite measures 0.8 mm in length, the sarcoptic mite 0.5 mm, the chorioptic mite 0.4 mm, and the psorergatic mite 0.15 - o.2 mm.

Onset of the disease is marked by the animal's response to irritation caused by the mites. Itching usually is more intense in psoroptic or common scabies, and sarcoptic mange than in chorioptic mange.

Psoroptic scabies: Serum oozes from wounds, and scabs normally begin to form 15 to 45 days after mites get on the host. The entire body may become involved. The incubation period for the other scabies is longer.

Sarcoptic mange: The sarcoptic mites pierce the upper layer of the animal's skin and burrow underneath. Mating and ovipositing take place in the burrow.

Chorioptic mange: Chorioptic mites may attack any part of the body; they often infect the escutcheon first. The wounds are small, and the skin under the thin scabs is only slighty swollen and inflamed.

Demodectic mange: The lesions of demodectic mange in cattle appear as nodules in the skin which may not be detected in a heavy haircoat. The mites apparently do not cause affected cattle to rub or scratch.

Psorergatic itch: A new mite species, Psorergates bos, the cattle itch mite, was first reported in 1963.

Treatment may be accomplished safely and effectively by dipping all animals in a herd or flock in a "permitted" pesticide twice with a 10- to 14-day interval.

Psoroptic sheep scabies has been eradicated from the United States. Efforts to control scabies began in the 19th century, but are usually marked from June 1, 1905, when all territory west of the eastern border of North Dakota, South Dakota, Nebraska, Kansas, Oklahoma, and Texas was placed under quarantine. The last case was confirmed January 1970 in a flock of eight sheep in New Jersey.

Eradication of psoroptic cattle scabies also began in the 19th century. A quarantine was established in 1905 on all territory west of the Mississippi River and the eastern border of Minnesota. The program progressed satisfactorily and many people believed it had been eradicated when the disease was not reported for 3 years, beginning in 1951. A total of 419 outbreaks were reported from 1954 through fiscal year 1975.

The program provides for diagnosis through isolation and identification of the mite, premises quarantine under State authority, supportive area quarantine under Federal authority, supervised treatment with permitted pesticide to eliminate the infection, and detailed epidemiologic investigation. All States are notified of each outbreak to alert them of the danger.

Program activities and costs vary widely from year to year. The fluctuations are created by response to outbreaks and return to less activity after periods of outbreaks. Losses were estimated at $46 million annually before the eradication program began. Cost estimates of the disease in fiscal year 1972, when 91 outbreaks were reported, range from $30 to $75 million. Federal program expenditures have dropped to approximately 1.25 cent per animal for scabies eradication and was, in fact, less than 1 cent per head in fiscal year 1975.

Development of large contract feedlots and movement it involves has seriously complicated epidemiologic investigation.

The greatest problem area has been the Southwest. Future activities will be directed there.

5. Scrapie eradication

Scrapie is an infectious, chronic, degenerative disease of sheep and goats with an onset that is difficult to detect. An owner may first notice only unusual behavior in affected sheep. The veterinarian must become adept at recognizing early signs and be qualified to explain in detail characteristics of the disease to the owner.

Diagnosis of scrapie is based on signs, history, and histopathologic findings. The disease appears most frequently in sheep 2 to 4 years old and seldom in sheep under 18 months of age. A clinical diagnosis of scrapie is confirmed by demonstrating vacuoles in neurons of the medulla on histopathologic examination. The disease should be differentiated from listeriosis, Aujeszky's disease, rabies, pregnancy toxemia, and scabies.

Scrapie was first diagnosed in the United States in a Michigan flock in 1947. The disease has now been diagnosed in 234 flocks in the States of Alabama, California, Colorado, Connecticut, Georgia, Idaho, Illinois, Indiana, Iowa, Kansas, Kentucky, Louisiana, Maryland, Michigan, Mississippi, Missouri, New Jersey, New York, North Carolina, Ohio, Oklahoma, Oregon, Pennsylvania, South Dakota, Tennessee, Texas, Utah, Virginia, West Virginia, Wisconsin, and Wyoming. Of the affected flocks, 10 were of the Cheviot breed, 6 of the Hampshire breed, 2 of the Montadale breed, 213 of the Suffolk breed, and 3 of crossbred sheep.

The cause of scrapie has been a subject of controversy for many years. The consensus among research workers today is that scrapie is caused by a transmissible agent, that it is a communicable and infectious disease, and that its spread from affected to healthy animals is controlled by inherited resistance or susceptibility of the individual animals exposed to the causative agent. The infectious agent of scrapie can be demonstrated readily through artificial inoculation of susceptible animals by nearly any route with many of the body tissues of naturally affected sheep and goats. The disease has a wide artificial host range that is increasing in recognition. Scrapie has been transmitted by inoculations to sheep, goats, mice, rats, hamsters, gerbils, deer mice, mink, ferrets, and the following monkeys: rhesus, cynomolgus, squirrel, spider, and capuchina. The fact that scrapie is readily transmissible to such a large host range, and particularly to the subhuman primates, has caused considerable concern in the scientific community of both the human and veterinary field regarding the human health hazard of this disease.

The natural disease has now been transmitted by contact to healthy Angora and Angora crossbred, Nubian and Nubian-cross-Toggenburg goats, and Hampshire, Rambouillet, Suffolk, and Targhee sheep born and reared in contact with a succession of scrapie-affected Cheviot and Suffolk sheep at Mission, Texas.

The State-Federal Cooperative Eradication Program now recognizes both the infectious disease theory and the inheritable resistance of susceptibility of the animal to scrapie. The program provides for slaughter of infected and source flocks and all exposed animals sold from these flocks. However, handling of other than directly exposed animals moved from such flocks and animals related to scrapie-affected animals has been changed to provide more emphasis on spread through females and less emphasis on spread via the sire. The program provides for slaughter of all lambs or kids born of scrapie-affected rams or ewes, bucks, or does. The succeeding generation of ewes and does descending from the scrapie ewe or doe also is slaughtered. The dam of a scrapie-affected animal and exposed ewes and does are slaughtered and all lambs or kids born of such females are slaughtered. Flocks from which bloodline or exposed animals have been slaughtered are placed under surveillance and inspected semiannually for a period of 42 months after last exposed.

When scrapie is suspected, animal health officials should be notified immediately. The suspected animal should not be slaughtered until the officials have had an opportunity to observe the clinical signs and have determined that the case has advanced sufficiently so that a satisfactory specimen of brain tissue can be obtained for laboratory examination.

6. Screwworm eradication

Screwworms are the larvae (maggots) of the fly, Cochliomyia hominivorax. They are true parasites, feeding only on the living flesh of warmblooded animals. Infested, untreated animals may die.

Screwworms are natives of tropical and subtropical areas of North and South America. They were first reported in the Southwest almost 150 years ago. In 1933, screwworms were reported in Georgia, presumably introduced on infested animals from the Southwest. They spread rapidly and within 2 years were found throughout Florida and southern Georgia. Each summer, they would spread into Georgia, Alabama, South Carolina, and other southeastern areas, but the mild winter climate of peninsular Florida and, occasionally southern Georgia, Alabama, and South Carolina permitted them to exist through the winter. The most favorable climatic conditions of the United States for the year-round existence of the

screwworm are the southern part of Florida and southern Texas. Surveys revealed annual losses from screwworms of approximately $20 million in the Southeast. About one-half of this loss occurred in Florida.

During 1958-59, an eradication program was conducted over 85,000 square miles in Florida, Georgia, and Alabama with the production and release of more than 3 billion laboratory-reared screwworm flies sterilized with radioactive Cobalt-60. The mating of the laboratory-reared sterile males with native females resulted in the production of eggs that failed to hatch. Continued release of irradiated males in overwhelming numbers eventually reduced the native screwworm population in the Southeast to zero. Mass production and dispersal of sterile flies ended in November 1959. The cost for this successful eradication program was approximately $10 million or about one-half of the cost of living with screwworms each year.

During the eradication program, a livestock inspection line was maintained along the eastern border of Arkansas and Louisiana to protect the southeastern States from becoming reinfested with screwworms from the self-sustaining populations of the western States. This inspection was discontinued in June 1964.

In the spring of 1962, a program was started to eradicate screwworms from Arkansas, Louisiana, New Mexico, Oklahoma, and Texas. This was a much more complex and difficult undertaking than the elimination of the pest from the southeastern States. In the Southeast, screwworms usually were able to survive through the winter only in peninsular Florida. Water on three sides and cold weather on the north acted as effective barriers. The southwestern States have no such advantages. The screwworm population in the Republic of Mexico provides a constant threat of reinfestation.

A barrier zone was established along the United States-Mexico border to protect the area from reinfestation. This barrier zone is formed by continuous release of sterile screwworm flies to prevent the invasion of native flies that could establish a self-sustaining population. The southwestern States of Texas, New Mexico, Oklahoma, Arkansas, and Louisiana were declared to be free of screwworms in February 1964. However, sporadic outbreaks have occurred since that time caused by migrating flies and movements of infested animals. Each outbreak has been successfully suppressed.

In the spring of 1965, eradication efforts were initiated in Arizona and California, and the artificially sterile fly barrier zone along the Mexican border was extended to the Pacific Ocean.

In spring of 1966, California and Arizona were declared free of screwworms.

It was estimated that screwworms caused an average annual loss of $100 million to the livestock industry before the beginning of the screwworm eradication program. Cost of maintenance of the sterile screwworm fly barrier has been about $10 million a year. On August 28, 1972, the Secretaries of Agriculture from the United States and Mexico signed an agreement to eradicate screwworms from Mexico and establish a barrier zone at the Isthmus of Tehuantepec. This program was estimated to take about 5 years and, upon completion, would provide substantially more protection from screwworm invasion into the United States. Following a 4-year effort, screwworms were declared eradicated from Puerto Rico and the Virgin Islands on July 2, 1975. Sterile flies were transported from the Mission, Texas, plant and dispersed over Puerto Rico and nearby areas by the U.S. Air Force and U.S. Air Force Reserves. Knowledge gained in this effort will be valuable in the eradication of screwworms from Mexico. A new sterile fly production facility was completed near Tuxtla Gutierrez, Chiapas, in the Isthmus of Tehuantepec in southern Mexico in late 1976. Eradication efforts were begun in 1977. Screwworms were eradicated from the Baja California Peninsula in 1979. It was a banner year during 1980 through September in that only two infestations were reported in the United States. Both cases were in Texas. More importantly, self-sustaining populations were eliminated from the States of Mexico bordering the United States. The goal of the program is to have eradication achieved down to the Isthmus and the barrier established by the end of 1984.

Veterinarians should be alert for cases of myiasis when they treat animals or issue health certificates. When dipterous larvae are found, animal health officials should be notified immediately and specimens collected for identification at the National Veterinary Services Laboratories, Ames, Iowa. Interstate movement of livestock infested with screwworms is unlawful. For regulations concerning interstate shipment of screwworms, see CFR, Title 9, Part 71 and Part 83.

F. Other diseases of national concern

1. Leukosis

The term "leukosis" embraces several diseases of lymphatic tissues and affects all domestic livestock, poultry, and man. It is particularly prevalent in chickens and rodents, and the viruses of avian and murine leukosis have been studied extensively. Most experts agree that the bovine leukemia virus is involved in etiology of bovine leukosis, although genetic susceptibility and other factors also appear to play a role in expression of disease.

Denmark and Germany are both involved in bovine leukosis eradication programs and most European countries have imposed import test requirements for the bovine leukemia virus.

Bovine leukosis is not regarded as a very costly disease in the United States, but the bovine leukemia virus does appear to be prevalent in our cattle. Most bovine leukemia virus infection in this country does not result in clinical disease and there does not appear to be any human health risk associated with this virus. It is becoming more important in terms of our cattle export, and it is evident that bovine leukosis will assume increasing importance in this country in the years to come.

2. Mastitis

Mastitis is the most serious and costly disease of dairy cattle in the United States. Although the causes are many and varied, several are infectious. At least one form of mastitis--that caused by Streptococcus agalactiae--can be eradicated. Because of its insidious nature, however, it is frequently reintroduced with newly purchased cows. Other forms of mastitis can be materially reduced in frequency through improved husbandry, meticulous milking procedures, good sanitation, proper maintenance of milking equipment, and constant surveillance of milk quality.

The National Mastitis Council is leading the mastitis abatement effort in the United States; statewide mastitis committees are being organized everywhere to increase local efforts. There is a trend toward organized State programs, based on milk quality and screening tests, with obligatory participation by all dairymen. Most such programs utilize bulk milk tests that disclose abnormally high leukocyte content. Because the mammary secretions of cows with mastitis do not meet the definition of milk as a human food product, bulk supplies containing such abnormal secretions are considered adulterated. Drugs used in treating mastitis also must be excluded from the public milk supply. The private practicing accredited veterinarian can do much to alleviate the mastitis situation and improve the quality of the public milk supply. Health examinations of dairy cows should always include the udder.

3. Pseudorabies

Pseudorabies, also known as "mad itch" and Aujeszky's disease, is a herpesvirus infection transmissible naturally or experimentally to most mammals and birds. Man, higher apes, and reptiles appear to be resistant. Until recently, the virus in swine had an ideal host-parasite relationship in that only rarely did it cause illness. However, it occasionally spilled over into other species as the fatal disease, "mad itch", first reported in the United States in 1813. In 1902, Aujeszky published the first scientific report of the disease in cattle, and subsequently in a dog and a cat. Shope, in 1931, serologically connected mad itch and Aujeszky's disease. Illness in swine was reported rarely until a virulent form appeared in Europe in the 1950's and in the United States in the 1960's. Since then, prevalence and severity of the disease appear to be increasing. The disease has been reported in most States of the United States.

Many European countries instituted vaccination programs early. Vaccination did not prevent outbreaks and losses. At least one country, Hungary, is abandoning vaccines and will attempt eradication. Denmark is a notable exception in that use of vaccines was never permitted because they were considered to entail unacceptable risks. A modified live pseudorabies vaccine and two killed pseudorabies vaccines are available for use in the United States.

Researchers in the United States recently double vaccinated pigs that were serum neutralization (SN) test negative, challenged them 2 weeks after the second vaccination with virulent pseudorabies virus, then 90 days after challenge stressed the pigs with dexamethazone and recovered a virulent pseudorabies virus. This demonstrates that vaccinated pigs can become infected and harbor the virus for a long period; however, the vaccine is of value in preventing economic loss in many instances.

Since pseudorabies can occur in swine with few, if any, visible signs, hogs serve as a natural reservoir for the disease agent. Pseudorabies may cause death losses of up to 100 percent in pigs less than 2 weeks of age. Swine can transmit pseudorabies virus to cattle and sheep. There is some evidence of lateral transmission in closely confined flocks of sheep.

In swine, pseudorabies can cause sows to abort or produce stillborn or mummified feti. In baby pigs, pseudorabies may cause sudden death with few clinical signs. More often, death is preceded by fever which may exceed 40.6C (105F), dullness, loss of appetite, vomiting, weakness, lack of coordination, and convulsions. When vomiting and diarrhea occur, the disease in baby pigs closely resembles transmissible gastroenteritis (TGE).

After 3 weeks of age, pigs usually develop some resistance to the disease, and death losses may decrease from about 50 percent in pigs exposed when 3 weeks of age to less than 5 percent in pigs exposed when 5 months old. Death losses vary with different strains of the virus, and even in adult pigs severe death losses occasionally occur. European workers now report that a program of repeated pseudorabies vaccination did not prevent significant losses from pseudorabies-related pneumonia in market age swine.

Pseudorabies usually is spread by direct hog-to-hog contact. Natural infections probably enter via the nasal passages during inhalation or into the oral cavity by ingestion. The primary site of viral replication appears to be the upper respiratory tract. The virus is shed then in nasal discharges and airborne droplets.

Pseudorabies usually is introduced into a herd by purchase of an infected hog. The role of pets and feral animals is not clear but appears to be a factor within endemic areas. Owners of infected herds, on occasion, allege that they have seen ill wild animals on their premises before an outbreak.

Unique disease characteristics relevant to control and/or eradication are:

1. There is no solid immunity from having the disease. Infected swine must be considered to be carriers and potential shedders of the virus.

2. Infection in swine may be asymptomatic or pseudorabies may be misdiagnosed as another disease. Thus, it may spread within a herd without being recognized.

3. Shedding of virus is intermittent--the source of infection may be difficult to establish as carrier swine may be in a susceptible herd for months or years before transmitting the agent.

4. Infection, once established in swine herds, tends to be latent for long periods and then to recur due to decreased herd immunity.

5. Studies in pseudorabies-infected herds in the United States and elsewhere document that virulent virus replicates in vaccinated animals.

Interstate regulations--Part 85 of 9 CFR--governing interstate movement of livestock with respect to their pseudorabies status became effective on May 17, 1979.

4. Salmonellosis

Salmonellosis is the most frequently reported bacterial disease in the United States that is common to man and animals. Previous epidemiologic investigations indicate that transmission of Salmonella from animal feeds to animals and animals to animal products (for human food) to man occurs. (Livestock and poultry feed ingredients from animal and marine sources were found to have the highest Salmonella contamination rate in a 1967 State-Federal survey for Salmonella in animal feeds at basic feed mills.) Salmonellae are found commonly in all animals, and there are over 2,000 serotypes. Although the serotypes vary substantially in pathogenicity, all serotypes should be considered as pathogens of very young or debilitated animals.

5. Trichinosis

Trichinosis is worldwide in distribution and most likely has affected man as well as animals since ancient times. Cost for control of this parasite (meat inspection, special processing) has probably exceeded by more than 100 times the combined amount spent for all other helminthic diseases. Infection in our Nation's swine is at an all-time low, with the most recent surveys having disclosed an infection rate of 0.12 percent in grain-fed hogs and only 0.5 in hogs fed cooked garbage. Hogs fed raw garbage are likely to have a much higher prevalence of trichinosis infection.

A recently developed technique for identifying trichinae-infected swine at slaughter appears to have merit as a tool in eradication of this disease. In this technique, diaphragm samples are collected and one-half of each is pooled into groups of twenty. These are subjected to digestion technique, then examined microscopically. If trichinae are found, each remaining half of diaphragm sample of the 20-sample lot is tested to identify the infected animal.

Studies to date indicate that this method is practical and will assist in providing trichinae-free pork. The method also will provide a traceback system under which trichinae-infected herds can be identified, providing a means to eliminate these foci of infection.

G. Cleaning and disinfection

1. Cleaning

Cleaning is the thorough mechanical removal of gross waste. Thorough cleaning cannot be overemphasized in any disease eradication effort.

-All bedding, manure, and accumulated waste should be removed.

-Surfaces should be cleaned thoroughly by scrubbing, sand blasting, steaming, or by use of high pressure water and suitable detergent mixtures.

-Surfaces are flushed with clean water and a disinfectant applied, preferably with pressure spray at 90 to 120 pounds per square inch.

2. Disinfection

Disinfection is the chemical destruction of pathogenic organisms.

-For destruction, there must be contact. There can be no contact of disinfectant with organisms through organic debris. Disinfection, therefore, must be preceded by thorough cleaning.

-Disinfectants should be handled with care, mixed according to instructions, and disposed of properly.

3. Responsibilities

-Accredited veterinarians engaged in disease eradication or control programs should see that premises, equipment, and vehicles are cleaned and disinfected. At the time reactors are tagged, branded, and appraised, it is the duty of the accredited veterinarian to explain in detail and to demonstrate to the farmer or others, as necessary, proper cleaning of premises, equipment, and vehicles.

4. Precautions in use

Lye-Lye is very caustic. It will burn skin and corrode metal. It should be handled carefully. Rubber boots should be worn. Lye will destroy many micro-organisms and is a good cleaning agent. However, it is not effective against the tubercle bacillus and is not a permitted disinfectant against tuberculosis.

Sodium orthophenylphenate-For effective disinfection, this solution must be applied at a temperature of 15.6C (60F) or higher. Whenever the ambient temperature falls below 15.6C (60F), the solution must be heated to at least 49C (120F). This material is not effective when preceded by cleaning with sodium hydroxide (lye) or other highly alkaline solutions. Containers should be closed tightly to prevent deterioration.

Spray equipment-When spray equipment is used for disinfecting, electricity in the building always should be disconnected. This is a safety precaution to prevent fire and to prevent possible injury to the operator.

Recommended Disinfectant Mixtures

Disinfectant	%	Metric	English	Disease
Cresylic disinfectant (U.S.D.A. approved marked on can)	4	113.4 gms. 3.7854 L.	4 oz. to 1 gal. of water	Brucellosis Hog cholera Shipping fever Swine erysipelas Tuberculosis
Sal soda		382.725 gms. 3.7854 L.	13 1/2 oz. can to 1 gal. of water	Foot-and-mouth Vesicular exanthema
Sodium carbonate (Soda ash)	4	453.6 gms. 11.3562 L.	1 lb. to 3 gal. of water.	Foot-and-mouth Vesicular exanthema
$Na(OH)_2$ Sodium hydroxide (Lye)	2	382.725 gms. 18.927 L.	13 1/2 oz. can to 5 gal. of water	Foot-and-mouth Vesicular exanthema
Lye	5	1913.625 gms. 37.854 L.	5 (13 1/2 oz.) cans to 10 gal. of water	Anthrax Black leg (Let solution remain in vehicle for 8 hours and then wash away)
Sodium ortho-phenylphanate		0453.6 gms. 45.4248 L.	1 lb. to 12 gal. of water 15.6C (60F) or over	Tuberculosis Infectious laryngo-tracheitis
1-stroke-environ " "		1-256 1-256 1-100	1-256 1-256 1-100	Hog cholera Newcastle African swine fever (60 min.)

Aircraft Disinfectant

Sodium carbonate	4	453.6 gms. 11.3562 L. + 11.3 gms. sodium silicate	1 lb. to 3 gal. water + 0.4 oz. sodium silicate	Foot-and-mouth

H. Import/export

1. Import - animal products and byproducts

a. Regulations

Imported meats, animal byproducts, and related materials may by products be a means of introducing foreign animal disease agents into the United States. The Department of Agriculture has regulations governing importation of such products designed to minimize this risk. These regulations are administered by Veterinary Services. They are covered in Title 9, CFR, in the following parts:

Part 94-Rinderpest, foot-and-mouth disease, hog cholera, exotic Newcastle disease (avian pneumonencephalitis), and African swine fever. Prohibited and restricted importations--prohibits ruminants, or swine, or of fresh, chilled, or frozen meat of ruminants and swine from any country declared by the Secretary of Agriculture to be infected with foot-and-mouth disease or rinderpest. The regulation also has sanction in Federal law, Section 306a of the Act of June 17, 1930. The Department amended the regulations in October 1972 and July 1973, with respect to importation of live swine and pork products from all countries designated as infected with hog cholera or swine vesicular disease. The action imposed a prohibition on live swine and on fresh, chilled, or frozen pork or pork meat products. Certain restrictions were placed on processed pork and pork meat items. In January 1973, the Department amended the regulations applicable to importation of poultry and game bird carcasses or parts or products thereof and eggs, other than hatching eggs. The action prohibited, with certain exceptions, importation of fresh chilled or frozen poultry and game bird carcasses from most countries. It placed tight restrictions on shipments of imported table eggs. The action was taken to provide our poultry industry with protection against exposure to exotic Newcastle disease virus.

-Part 95-Sanitary control of animal byproducts (except casings), and hay and straw, offered for entry into the United States.

-Part 96-Restrictions of importations of foreign animal casings offered for entry into the United States.

b. Animal products

Millions of pounds of meat are imported each year from countries that are considered to be infected with foot-and-mouth disease, swine vesicular disease, hog cholera, and/or exotic Newcastle disease, as well as lesser amounts from African swine fever-infected countries. All such meat is subject to specific processing requirements as contained in 9 CFR 94 to qualify for entry into the United States. These requirements are in addition to sanitation and wholesomeness requirements for human consumption that are administered by Meat and Poultry Inspection Programs.

Veterinary Services also is concerned with all products and byproducts that come from countries where rinderpest, foot-and-mouth disease, African swine fever, hog cholera, swine vesicular, or exotic Newcastle disease are known to be present. Accordingly, unless effective and acceptable processing has been done in the country of origin, such materials from infected countries are permitted entry only under restrictions.

Entry under restrictions means:

-Inspection of cargo at dockside.

-Supervision of loading of restricted products on railroad cars or motor trucks.

-Sealing transporting vehicles with Government seals.

-Release of shipments to processing establishments previously approved by Veterinary Services, APHIS.

1. Import animals (including birds), animal semen, and hatching eggs

a. Regulations

The Department of Agriculture's regulations administered by Veterinary Services to prevent introduction of foreign animal disease agents into the United States are contained in the following parts of Title 9, CFR:

-Part 92--Importation of certain mammals, animal semen, poultry and other birds, and hatching eggs.

-Part 94--Rinderpest, foot-and-mouth disease, Newcastle disease (avian pneumoencephalitis), African swine fever, hog cholera, and swine vesicular disease: Prohibited and restricted import animals including poultry.

b. Purpose

These two regulations are evidence of an alertness to the dangers accompanying importation of certain mammals, animal semen, birds, and hatching eggs. There is increasing awareness of the potential risk from the agents of various diseases, such as foot-and-mouth disease, rinderpest, contagious bovine pleuropneumonia, African swine fever, East Coast fever, heartwater, fowl plague, exotic strains of Newcastle disease virus, and others, including vector-borne diseases.

In addition, the Department is required to prevent introduction of any communicable disease of livestock or poultry whether or not it is exotic to the United States.

c. Animals governed by import regulations

The regulations govern importation of cattle, sheep, goats, and other ruminants (such as buffalo, deer, antelope, camels, and llama); also domestic swine and all varieties of wild hogs, horses, burros, mules, zebras, and poultry (including chickens, ducks, geese, swans, turkeys, doves, pheasants, grouse, partridges, quail, guinea fowl, and pea fowl of all ages) and eggs for hatching purposes, pigeons, and all other species of birds.

d. Prohibited imports

Current legislation prohibits importation of cattle, other ruminants, and swine from any country declared by the Secretary of Agriculture to be infected with foot-and-mouth disease or rinderpest. Regulations specify that wild ruminants from such countries may be imported into the United States and outline the manner in which they may enter. Such animals may be imported for exhibition only and they must be maintained under permanent post-entry control in zoos specifically approved for that purpose by Veterinary Services.

Cattle also are denied entry from any country where other serious exotic cattle diseases exist, such as ephemeral fever; and from cattle fever tick-infested areas, such as Australia, countries in Central America, and islands of the Caribbean. There are provisions for certain tick-free cattle to move from tick-infested areas of Mexico into Texas and from the British Virgin Islands into the U.S. Virgin Islands. In the latter instance, cattle move for slaughter only.

e. Ports of entry

To provide for the orderly importation of animals, including poultry and other birds, and for veterinary inspection service, the Department has designated ports of entry--17 air and ocean, 45 along the Canadian border, and 15 along the Mexican border. Importations must be made through these designated ports, except on specific request when the Deputy Administrator, Veterinary Services, Animal and Plant Health Inspection Service, may designate other ports on a case-by-case basis with the concurrence of the Secretary of the Treasury.

f. Quarantine stations

The Department of Agriculture owns and operates the New York Animal Import Center for quarantine of mammals and birds entering the United States at the port of New York. Veterinary Services operates and leases the Miami, Florida, facility from the local port authority and owns and operates a small facility at the port of Honolulu. Harry S Truman Animal Import Center, Key West, Florida, is a new, maximum security facility. At other ports of entry, when quarantine is required, it is the responsibility of the importer to arrange for quarantine facilities subject to approval of Veterinary Services. Commercial importation of birds also may be handled for purposes of quarantine at one of the more than 90 privately owned and operated USDA-approved quarantine facilities. Smuggled and abandoned birds are quarantined by the USDA at Mission, Texas, and San Ysidro, California, in USDA-owned and -operated facilities and released for public auction after quarantine. Privately owned pet birds are quarantined at nine designated USDA-owned and -operated facilities in New York, New York; Miami, Florida; Los Angeles, California; Honolulu, Hawaii; and ports of entry along the U.S.- Mexican border.

g. Basic import requirements

An import permit must be obtained by the importer from the Hyattsville, Md., office of Veterinary Services, Animal and Plant Health Inspection Service, before livestock and poultry are potentially eligible for importation from the country of origin.

Permits usually are not required for livestock, or animal semen, or poultry from Canada (unless they have been in countries other than Canada or the United States), for horses from any country, or for ruminants from the northern States of Mexico. However, a permit is

necessary on air shipments from Canada. Swine from Mexico are prohibited because of hog cholera.

Certification by a salaried veterinary officer of the national government of the country of origin showing freedom from disease and exposure thereto must accompany shipment to the port of entry.

Veterinary inspection must be given at the port of arrival in the United States.

Quarantine, when required, must be completed for a specified minimum period at the port of entry (30 days for poultry, ruminants, or swine, and 60 days for equine stock from African horsesickness-infected countries). New York City is the only port where equine stock from endemic African horsesickness (AHS) countries may be quarantined.

Equine stock from all countries in the western hemisphere, except Canada and Mexico, must pass 7 days port of entry quarantine. Horses other than those from AHS-infected countries, in the western hemisphere (except Canada), are quarantined at port of entry long enough to complete inspection and for port of entry tests to be returned from USDA's National Veterinary Services Laboratories at Ames, Iowa. Horses originating in or transiting AHS-infected countries are required to pass a minimum 60-day quarantine at the port of New York in USDA facilities.

h. Inspection at port of entry

Clinical examination of the mammals and birds is done by a veterinarian at the port of entry. All animals found to be free from evidence of communicable disease and exposure thereto within 60 days before their exportation from the shipping country may be admitted subject to various other provisions. For poultry and other birds, the time element is 90 days in lieu of 60 days.

All necessary accompanying papers, such as certificates, breed registry, and test charts, must be accurate and complete before importation is permitted.

i. Specific animals

-Domestic ruminants must be accompanied by a health certificate written in English and, when applicable, a test chart showing negative results to tests for tuberculosis and brucellosis.

-"Horses from all countries except Canada must show negative results to dourine, glanders, equine piroplasmosis, and equine infectious anemia tests on blood samples collected at the U.S. port of entry."

-Dogs subject to the Department's regulations are collie, shepherd, and similar breeds intended for use in handling livestock. To determine their freedom from Multiceps multiceps, such dogs, except those from Canada, Mexico, and countries of Central America and the West Indies, are examined at the port of entry.

-Wild ruminants and swine (zoo animals) may be imported from a USDA-approved embarkation station in certain foot-and-mouth disease or rinderpest infected countries, but rigid requirements have been established. One of these is that, following release from quarantine at the port of New York, the animals must be consigned only to a Department-approved zoo operating under acceptable standards and under appropriate supervision.

j. Precautionary treatment

Certain precautionary treatments of animals against external parasites and disinfection of accompanying equipment and litter are carried out to further safeguard the livestock of this country.

3. Export - by products

The Department of Agriculture's regulations administered by Veterinary Services for certification of inedible animal byproducts are contained in Part 156--Inspection and Certification of Animal Byproducts. An explanation of these regulations appears in Veterinary Services Memorandum 594.1, Certification of Inedible Animal Products.

The regulation provides for inspection and certification upon request, of the class, quality, quantity, and condition of inedible animal byproducts. It also provides authority for the Department to foster and assist in development of new and expanded markets, both domestic and foreign, and in movement of agricultural products to consumers in the United States and abroad. Under the provisions of the regulations, Veterinary Services inspectors are authorized on a reimbursable basis to issue and endorse sanitary certificates to accompany shipments of animal byproducts such as, but not limited to, hides, meat meal, tankage, bonemeal, bones, blood products, feather meal, and inedible tallow.

For a Veterinary Services representative to properly issue or endorse these sanitary certificates, he must know the import requirements of the country of destination. It is also necessary that operation of the processing plant be under direct supervision of an employee authorized by Veterinary Services to perform such inspection service. Only certificates that contain statements that are known to be factual are to be issued and endorsed by representatives of Veterinary Services, APHIS.

This regulation also provides for additional supervision beyond that which can be furnished by the Meat and Poultry Inspection Programs, Food Safety and Quality Service (FSQS), USDA, involving disposition of inedible or condemned materials. These materials are processed under supervision of Veterinary Services or meat inspection personnel on a reimbursable basis for preparation of canned pet food and other commercial products.

4. Exports - animals

a. Regulations

Regulations governing "Inspection and Handling of Livestock for Exportation" are contained in Part 91. These are minimum requirements and take precedence over import regulations of the receiving foreign country if the latter are less restrictive.

b. Purpose

-To promote foreign trade by insuring, as far as possible, that only sound and healthy animals are exported.

-To provide for humane handling and safe transport.

c. Animals governed by export regulations

Export regulations of the Department are applicable to cattle, sheep, goats, swine, horses, mules, and burros.

When required by import regulations of the receiving country, certain other mammals, poultry, and hatching eggs may be inspected and a health certificate issued.

d. Foreign import requirements

Veterinary Services is familiar with the import requirements of several foreign countries and has agreements with them. However, current information on

requirements of other countries is difficult to maintain. It is the responsibility of the exporter to obtain current information concerning import regulations of the receiving country. Since most foreign countries require that a permit or license be issued by them before animals may be imported, requirements that are applicable to a proposed importation usually are included when the permit or license is issued. Whenever it is determined that there are several health requirements by a foreign country, the accredited veterinarian should contact the Area Veterinarian in Charge, Veterinary Services, if there is any doubt about the animals meeting the requirements.

e. Inspection at origin

Veterinary inspection of animals intended for shipment to a foreign country must be made at origin (farm or other premises where animals are kept) by an accredited veterinarian, a full-time, State-employed regulatory veterinarian, or an APHIS veterinarian. However, the receiving country may require inspection and certification by an APHIS veterinarian. This is true for sheep and goats destined to Canada. Test charts and health certificates should be completed and issued in accordance wiith specific instructions.

Departmental export regulations require that all dairy and breeding cattle, except calves born after test of the dam, be tuberculin tested with negative results within 90 days from date of shipment from the U.S. point of origin.

All cattle (bulls and females) over 6 months of age (except officially brucellosis-vaccinated female dairy cattle under 20 months of age, and officially vaccinated female cattle of the beef breeds under 24 months of age) must have blood tests for brucellosis with negative results in dilution of 1:50 and above within 30 days from date of shipment from the U.S. point of origin.

Besides the tuberculin and brucellosis tests, some countries require other tests for diseases such as paratuberculosis and anaplasmosis. If made, the kind and results of these tests should be shown clearly.

An officially vaccinated animal is defined as a bovine animal of a dairy breed vaccinated against brucellosis from 2 to 6 months of age--or a bovine animal of a beef breed in a range or semirange area, vaccinated against brucelllosis from 2 to 10 months of age--under supervision of a Federal or State veterinary official,

with a vaccine approved by Veterinary Services, APHIS, USDA; permanently identified as a vaccinate; and reported at the time of vaccination to appropriate State and Federal agencies cooperating in eradication of brucellosis.

Officially vaccinated female dairy cattle 20 months of age and older and officially vaccinated female cattle of the beef breeds 24 months of age and older must have blood tests for brucellosis with negative results in dilution of 1:100 and above.

NOTE: Canada does not consider brucellosis vaccination of any animal official unless it was vaccinated between 2 and 6 months of age. If vaccinated after the day the animal becomes 6 months old, it is not official. The exact date of vaccination must be shown on the certificate.

The tuberculin test and the brucellosis test may be waived by the Deputy Administrator, VS, APHIS, when so requested by a responsible official of the country of destination, if he feels that it can be done without endangering the livestock export trade of the United States.

Department export regulations also require all breeding swine to be tested for brucellosis with negative results within 30 days before exportation.

f. Health certificate

A United States Origin Health Certificate is designed for shipments of livestock to foreign countries. Interstate permits must not be used for this purpose. Health certificates record the veterinary health inspection of export animals at point of origin and contain appropriate information about the diagnostic tests that were completed.

In addition, health certificates should show any immunizations given immediately before shipment, with appropriate dosage, product used, and date administered clearly indicated.

g. Completing certificates

Certificates accompanying animals to the port of export shall show proper identification of animals in the shipment with respect to breed, sex, and age in date of birth, and, when applicable, shall also show

registration name and number, tattoo markings, tag number, or other natural or acquired markings.

The correct date of issuance of the certificate should be indicated. This should coincide with the date of actual inspection of the animals.

Only true statements should be made. Unsubstantiated statements such as "these animals are free of all diseases" are not acceptable.

Names and addresses of consignor and consignee must be shown.

Port of export and country of destination must be shown clearly.

h. Endorsement of health certificates

All copies of the completed certificate, as one of the necessary export requirements, shall be endorsed by the Federal Area Veterinarian in Charge in the State of origin, or by another APHIS veterinarian so authorized by the Deputy Administrator, VS, APHIS.

IMPORTANT: All copies of certificates must be legible and complete before they can be endorsed properly.

i. Transportation

Departmental regulations require that all animals intended for export be moved from premises of origin to a port of export in cleaned and disinfected trucks, railroad cars, or other conveyances unless such conveyances were not used previously to transport livestock. Crates must be constructed of new material or, if previously used to transport livestock, first must be cleaned and disinfected.

j. Reinspection and certification at port of export

Animals destined to a foreign country are inspected by a Veterinary Services veterinarian at ports of export specified by regulation, except that such reinspection of livestock destined overland to Canada and Mexico is the responsibility of salaried veterinarians of those Governments. If the animals are accompanied by properly executed and endorsed health certificate, and the Veterinary Services port veterinarian finds the animals to be free from evidence of communicable disease and

exposure thereto, he may issue a specific export certificate to that effect (except in regard to Canada and Mexico), which accompanies the animals to destination. Issuance of the export certificate is based upon the port veterinarian's inspection of the animals and his examination of the documents accompanying the shipment. The law precludes clearance for departure of an ocean vessel or airplane with livestock aboard until the export certificate has been issued.

k. Export livestock, poultry, and hatching eggs - special requirements

Livestock - Some special requirements for movement of livestock from the United States should be noted:

-Except for immediate slaughter, all sheep and goats destined for Canada must be inspected and the necessary certificates issued at the point of origin by an APHIS veterinarian.

All rodeo cattle, for entry into Canada, must meet all requirements for breeding cattle, except that steers and spayed heifers do not need to be tested for brucellosis.

Poultry and hatching eggs - This Department does not have regulations applicable to export shipment of poultry and eggs; therefore, such shipments are governed by import regulations of the receiving country.

Canadian authorities have approved a specific certificate (ANH form 17-35) for poultry and hatching eggs from the United States. These certificates may be obtained from the Area Veterinarian in Charge, Veterinary Services, APHIS, in the State of origin, who must also endorse them when completed. Inspection and certification for poultry and hatching eggs destined for Canada may be done by an accredited veterinarian. A summary of other requirements necessary to meet Canadian import regulations for poultry is contained on the reverse side of the certificate.

Mexican import regulations contain the requirement that a prior permit for livestock, poultry, and hatching eggs be obtained from the Ministry of Agriculture, Mexico, D.F., Mexico. They also require that health certificates accompanying such shipments to Mexico be visaed by a Mexican consular officer nearest the point of origin.

IMPORTANT: APHIS personnel authorized to endorse certificates for export livestock and poultry have been instructed not to do so unless the certificates have been:

-Issued by an accredited veterinarian, State veterinarian, or Federal veterinarian.

-Properly executed and there is reason to believe that all statements are accurate and factual insofar as can be determined and are not misleading or worthless.

5. Organisms and vectors

Organisms such as bacteria and viruses are being used in increasing numbers in research on both human and animal diseases. Department of Agriculture regulations require that no organism (which may introduce or disseminate any contagious or infectious disease of animals) or vector of such organism may be imported into the United States or be moved from one State to another without a permit from the Department of Agriculture, and must be in compliance with the terms thereof. The purpose of this regulation is to ensure that such agents are handled in a manner that will not endanger the health of our domestic livestock and poultry population.

Specifically, a permit must be obtained before importation of any organism, even though the same organism occurs naturally in the United States. However, it would be impractical to require a prior permit for movement within the United States of all animal pathogens that naturally occur in this country. The general policy is to require a permit for organisms for which eradication programs are being conducted, as well as for any other highly virulent organism. The viruses causing vesicular stomatitis, bluetongue, equine infectious anemia, scrapie, and hog cholera are examples of agents for which permits are required for interstate movement. Although eradication programs are being conducted, permits are not required for interstate shipment of brucellosis or tuberculosis organisms until their significance and distribution are known. Before shipping any organism, it is wise to consult with the Federal Area Veterinarian in Charge, Veterinary Services, APHIS, in your State to determine if a shipping permit will be necessary.

Importation into the United States of the live virus of foot-and-mouth disease is prohibited by Federal law. In addition, because the agents of diseases such as African swine fever, rinderpest, contagious bovine pleuropneumonia, African horsesickness, and several other

foreign animal diseases are considered too dangerous to study in the United States, USDA does not permit their importation.

When reviewing applications for permits, major factors considered are: The agent itself, source of the agent, qualifications of the individual requesting the agent, proposed use of the agent, and laboratory facilities where the agent will be studied. Inspections of facilities to determine that security provisions are adequate often are made by Veterinary Services veterinarians before issuing permits. Permits, when issued, may stipulate certain conditions under which the agent may be studied; for example, in vitro studies only, incineration of all wastes, and so forth, as additional safeguards to protect the surrounding livestock and poultry population.

In addition to requiring permits for movement of organisms and vectors, authorization is required for the importation of all animal material, including diagnostic specimens such as tissue, blood, serum, and the like. Such material could be infected unknowingly with dangerous animal disease agents and must, therefore, be handled in a manner that precludes the possibility of infecting domestic livestock or poultry. Before any diagnostic material is sent to the National Veterinary Services Laboratories, Ames, Iowa, permission must be obtained from the Federal Area Veterinarian in Charge.

Disease agents and vectors indigenous to all States and diagnostic specimens from animals known to be or suspected of being infected with such agents usually may be moved interstate without prior permit.

I. Veterinary biologics

1. Licensing and permits

Veterinary biological products that enter interstate commerce must be produced under and in compliance with the Virus-Serum-Toxin Act of March 4, 1913. All such biological products must be produced by an establishment holding valid licenses issued by the U.S. Department of Agriculture (USDA). Products from foreign countries cannot be imported into the United States unless the importer has a permit issued by the USDA.

2. Control activities

Regulations are issued so that licensed producers, as well as Government enforcement personnel, know the necessary requirements for compliance with the Virus-Serum-Toxin Act. All establishments holding U.S. veterinary licenses are subject to inspection by USDA personnel.

Unlicensed products are not tested routinely by Veterinary Services. Therefore, the Government cannot vouch for their purity, safety, potency, and efficacy. Quality of unlicensed products may vary widely. Unlicensed products cannot be transported interstate under current law and regulations.

3. Standards and product testing

Standards are established to insure that all licensed products are tested pure, safe, potent, and efficacious. National Veterinary Services Laboratories, Ames, Iowa, develop test methods and conduct tests of each product before a license is issued. Tests also are conducted on market serials to ascertain validity of the manufacturer's test results. Products that do not pass all required tests are not released for distribution.

4. Labels

All labels used on licensed veterinary biological products must be approved by the Department of Agriculture and must contain the following information: (1) true name of product, (2) identity of licensee or permittee, (3) license or permit number, (4) storage temperature recommendations, (5) full instructions for use, (6) serial number and expiration date, and (7) appropriate warnings. Labels and advertising material must not contain any information which is false or misleading.

J. Animal care

1. Animal welfare

a. Animals covered by Animal Welfare Act regulations

Animal welfare regulations of the Department of Agriculture are applicable to live or dead dogs, cats, guinea pigs, hamsters, rabbits, marine mammals, nonhuman primates, and all wild warmblooded vertebrates, except those specifically exempted. Exemptions include rats, mice, birds, farm animals, and horses.

b. Purpose

The purpose of the Animal Welfare Act and Regulations as revised in 1970 (PL 89-544 and PL 91-579) and amended in 1976 (PL 94-279) is:

-To protect owners of dogs and cats from the theft of such pets.

-To prevent sale or use of dogs and cats that have been stolen.

-To insure that certain animals intended for use in research facilities or for exhibition purposes or for use as pets are provided humane care and treatment by

persons or organizations engaged in using them for research, exhibition, or in transporting, buying, or selling them.

-To make unlawful animal fighting ventures (except cockfights in States which have no law against them).

c. Regulations

Regulations and standards governing humane care, treatment, transportation and handling of certain animals used or intended for use in research, exhibition, or for use as pets are contained in Part I, Title 9, Code of Federal Regulations (CFR). These standards list minimum requirements for handling, housing, feeding, watering, sanitation, ventilation, shelter from extremes of weather and temperature, transportation, adequate veterinary care, including appropriate use of anesthetic, analgesic, or tranquilizing drugs, and separation by species.

d. Veterinary medical care

Adequate veterinary medical care is one of the 10 minimum standards required by the Animal Welfare Act of 1970 and amended in 1976. Sections 3.10, 3.34, 3.59, 3.84, and 3.109 of Part 3, Standards, require that:

-Programs of disease control and prevention, euthanasia, and adequate veterinary care shall be established and maintained under supervision and assistance of a doctor of veterinary medicine.

2. Horse protection

The Horse Protection Act, PL 91-540, was enacted in December 1970 and was amended PL 94-360 in July 1976. The intent of Congress was primarily to prevent the showing of Tennessee Walking Horses that had been "sored," but the act includes all horses; animated gait horses, such as five-gaited saddle horses, fox trotters, and racking horses, are inspected regularly by USDA.

The 1976 Amendments provided for industry self-regulation via the Designated Person (DQP) Program. Show management may relieve itself of responsibility for the provisions of this Act by appointing and following the findings of a DQP.

The management of any horse show, horse exhibition, or horse sale or auction which does not appoint and retain a DQP shall be responsible for identifying all horses that are sore or otherwise in violation of the Act or regulations, and shall disqualify or disallow any horses

which are sore or otherwise in violation of the Act or regulations from participating or competing in any horse show, horse exhibition, horse sale, or horse auction.

Accredited veterinarians may be licensed by certified horse organizations to be DQPs. Accredited veterinarians who, however, are not licensed DQPs but have been hired by management to serve as the show veterinarian must perform in accordance with section 161.2(k) of the CFR.

PART II

Standards for Accredited Veterinarians and Rules of Practice, Code of Federal Regulations, Title 9, Animals and Animal Products, Revised as of January 1, 1980.

SUBCHAPTER I—ACCREDITATION OF VETERINARIANS AND SUSPENSION OR REVOCATION OF SUCH ACCREDITATION

PART 160—DEFINITION OF TERMS

§ 160.1 Definitions.

For the purposes of this subchapter the following words, phrases, names, and terms shall be construed, respectively, to mean:

(a) *"Service."* The Veterinary Services, Animal and Plant Health Inspection Service, U.S. Department of Agriculture.

(b) *"Deputy Administrator."* The Deputy Administrator for the Service or his representative to whom authority has heretofore been delegated or may hereafter be delegated to act in his stead.

(c) *"State."* Any State, Territory, the District of Columbia or the Commonwealth of Puerto Rico.

(d) *"Accredited Veterinarian."*[1] A veterinarian approved by the Deputy Administrator in accordance with the provisions of Part 161 of this subchapter to perform functions specified in Parts 1, 2, 3, and 11 of Subchapter A, and Subchapters B, C, and D of this chapter, and to perform functions required by cooperative State-Federal disease control and eradication programs.

(e) *"Veterinarian-in-Charge."* The veterinary official of the Service who is assigned by the Deputy Administrator to supervise and perform the official work of the Service in the State where the veterinarian concerned is accredited or wishes to be accredited.

(f) *"State Animal Health Official."* The State Animal Health Official who is responsible for the livestock and poultry disease control and eradication programs of the State in which the veterinarian is accredited or wishes to be accredited.

(g) *"Official certificate, form, record, report, tag, band, brand, or other identification."* Means any certificate, form, record, report, tag, band, brand, or other identification, prescribed by statute or regulations issued by the Secretary of Agriculture of the United States or State Animal Health Official, for issuance by an accredited veterinarian performing official functions under this subchapter.

(h) *"Secretary."* The Secretary of Agriculture or any officer or employee of the Department to whom authority has heretofore been delegated, or to whom authority may hereafter be delegated, to act in his stead.

(23 Stat. 32, as amended; 58 Stat. 734, as amended; 65 Stat. 693; 26 Stat. 417; 32 Stat. 791, 792, as amended; 33 Stat. 1265, as amended; 34 Stat. 1263, 1264; 41 Stat. 241; 41 Stat. 699; 65 Stat. 693; 76 Stat. 130, 132; 84 Stat. 1406; 15 U.S.C. 1828; 21 U.S.C. 80-86, 89, 96, 105, 111-113, 114, 114a, 114a-1, 115, 116, 120, 121, 125, 134b, 134f)

[39 FR 23050, June 26, 1974, as amended at 42 FR 41850, Aug. 19, 1977; 44 FR 63493, Nov. 11, 1979]

PART 161—REQUIREMENTS AND STANDARDS FOR ACCREDITED VETERINARIANS AND SUSPENSION OR REVOCATION OF SUCH ACCREDITATION

Sec.

161.1 Requirements for accreditation.
161.2 Standards for accredited veterinarians.
161.3 Suspension or revocation of veterinary accreditation.

AUTHORITY: 23 Stat. 32 as amended; 26 Stat. 417; 32 Stat. 791, 792, as amended; 33 Stat. 1265, as amended; 41 Stat. 699; 58 Stat. 734, as amended; 65 Stat. 693; 76 Stat. 130, 132; 84 Stat. 1406; 15 U.S.C. 1828; 21 U.S.C. 105, 111-114, 114a, 114a-1, 116, 120, 121, 125, 134b and 134f.

SOURCE: 39 FR 23050, June 26, 1974, unless otherwise noted.

§ 161.1 Requirements for accreditation.

(a) The Deputy Administrator is hereby authorized to accredit a veterinarian when he determines that such veterinarian (1) is a graduate of a college of veterinary medicine; (2) is licensed to practice veterinary medicine in the State in which he wishes to be accredited; (3) has made formal application for accreditation on Form 1-36A, "Application for Veterinary Accreditation"; (4) has passed an examination administered by the Service; and (5) has been jointly recommended by the State Animal Health Official and the Veterinarian-in-Charge for the State in which the veterinarian is licensed and wishes to be accredited.

(b) The Deputy Administrator is hereby authorized to reaccredit a veterinarian whose accreditation has been revoked when he determines, after the order of revocation has been in effect for not less than one year, that such veterinarian (1) is licensed to practice veterinary medicine in the State in which he wishes to be accredited; (2) has made formal application for accreditation on Form I-36A, "Application for Veterinary Accreditation"; (3) has been jointly recommended by the State Animal Health Official and the Veterinarian-in-Charge for the State in which the veterinarian is licensed and wishes to be accredited; and (4) such veterinarian has furnished adequate assurance that he will faithfully fulfill the duties of an accredited veterinarian in the future.

§ 161.2 Standards for accredited veterinarians.

An accredited veterinarian shall perform official duties subject to the supervision and direction of the Veterinarian-in-Charge and the State Animal Health Official and shall observe the following specific standards:

(a) An accredited veterinarian shall not issue a certificate, form, record or report which reflects the results of any inspection, test, vaccination or treatment performed by him, with respect to any animal or poultry, unless he has personally inspected each animal, bird, or flock in such a manner as to detect abnormalities, such as, but not limited to, locomotion, body excretion, respiration, and skin conditions. An accredited veterinarian shall thoroughly examine each animal, bird, or flock showing abnormalities, in order to determine whether or not there is the presence or absence of a communicable disease, or in the case of a horse being examined under Part 11 of Subchapter A, whether or not it complies with such regulations and the provisions of the Horse Protection Act of 1970, and any legislation amendatory thereof.

(b) An accredited veterinarian shall not sign any certificate, form, record or report, or permit such a certificate, form, record, or report to be used until, and unless, he has ascertained that it has been accurately and fully completed clearly identifying the animal(s) or bird(s) to which it applies and showing the results of the inspection, test, or vaccination, etc., he has conducted, except as provided in paragraph (c) of this section. An accredited veterinarian shall not sign any certificate provided for by the Animal Welfare Act or its regulations and standards unless he has ascertained that the statements contained therein are complete, clear and accurate. The accredited veterinarian shall distribute copies of certificates, forms, records and reports, according to instructions issued to him by the Veterinarian in Charge or the State Animal Health Official.

[1] The provisions of Part 11 of Subchapter A, and Subchapters B, C, and D of this chapter authorize Federal and State veterinarians and accredited veterinarians to perform specified functions. Full-time Federal (including military and State employed veterinarians are authorized to perform such functions, pursuant to delegation of authority or cooperative agreements without specific accreditation under the provisions of this subchapter.

(c) An accredited veterinarian shall not issue or sign any certificate, form, or report which reflects the results of any inspection, test, vaccination, or treatment, performed by another accredited veterinarian, unless the certificate, form, or report indicates that the inspection, test, vaccination, or treatment was performed by the other veterinarian; identifies the name of such other veterinarian; and includes the date and the place where such inspection, test, or vaccination was performed.

(d) An accredited veterinarian shall perform official tests, inspections, treatments, and vaccinations and shall submit specimens to designated laboratories in accordance with Federal and State regulations and instructions issued to the accredited veterinarian by the Veterinarian-in-Charge or the State Animal Health Official, or both.

(e) An accredited veterinarian shall identify reactor animals by branding and tagging or such other method as may be prescribed in instructions issued to him by the Veterinarian-in-Charge or the State Animal Health Official, or both.

(f) An accredited veterinarian shall immediately report all diagnosed or suspected cases of diseases of livestock, birds, or poultry named in § 71.3(a) and (b) of Part 71, Subchapter C of this Chapter, to the Veterinarian-in-Charge or the State Animal Health Official, or both. An accredited veterinarian designated to examine and observe horses at shows and exhibitions shall complete the form provided on all horses which he considers are sored and shall promptly report each horse considered by him to be sored to the Veterinarian-in-Charge for the State in which the horse show or exhibition is held in accordance with the Horse Protection Act of 1970, or any legislation amendatory thereto, and the regulations as promulgated in Part 11, Subchapter A of this Chapter.

(g) An accredited veterinarian shall take such measures as are necessary to prevent the spread of communicable diseases of livestock or poultry. Such measures shall include, but are not limited to, the use of sanitized instruments to collect specimens from, or to administer vaccines to such individual animals, birds, or poultry, and the cleaning and disinfecting of footwear, restraining chutes, and other equipment before proceeding to another premises.

(h) An accredited veterinarian shall keep himself currently informed on Federal and State regulations governing the movement of animals and poultry, and on procedures applicable to disease control and eradication programs, including emergency programs, and on definitions, regulations, and standards under the Animal Welfare Act, and any legislation amendatory thereof, and on regulations under the Horse Protection Act of 1970, and any legislation amendatory thereof. He shall carry out all of his responsibilities under the applicable Federal programs and cooperative programs in accordance with such regulations and instructions issued to him by the Veterinarian in Charge or the State Animal Health Official, or both.

(i) An accredited veterinarian shall not use or dispense in any manner, any drug, chemical, vaccine or serum, or other biological product authorized, for use under any Federal regulation or cooperative disease eradication program, without authorization from the Service or in contravention of any Federal or State statute or regulation, or instruction.

(j) An accredited veterinarian shall be responsible for proper use of all certificates, forms, records, reports, tags, brands, bands, or other identification used in his work as an accredited veterinarian and shall take proper precautions to prevent misuse thereof. He shall immediately report to the Veterinarian-in-Charge or State Animal Health Official the loss, theft, or deliberate or accidental misuse of any such certificate, form, record, report, tag, band, brand, or other identification. He shall not permit any certificate, form, record, report, tag, band, brand, or other identification, to be kept in the custody of anyone but himself prior to official use.

(k) An accredited veterinarian designated under the regulations issued pursuant to the Horse Protection Act of 1970, and any legislation amendatory thereof (Part 11, Subchapter A, 9 CFR), for the purpose of determining whether horses are in compliance with said Act, and any legislation amendatory thereof, and said regulations, shall thoroughly examine each horse in a professionally acceptable manner, in accordance with any instructions given by the Veterinarian-in-Charge, to determine whether or not each horse is in compliance with said Act, and any legislation amendatory thereof, and said regulations.

[39 FR 23050, June 26, 1974, as amended at 44 FR 63494, Nov. 2, 1979]

§ 161.3 Suspension or revocation of veterinary accreditation.

(a) The Secretary is authorized to suspend for a given period of time, or to revoke, the accreditation of a veterinarian when he determines that the accredited veterinarian has not complied with the "Standards for Accredited Veterinarians" as set forth in § 161.2, or in lieu thereof to issue a written notice of warning to the accredited veterinarian when the Deputy Administrator determines a notice of warning will be adequate to attain compliance with the Standards.

(b) Accreditation in a given State shall be automatically terminated when an accredited veterinarian's license to practice veterinary medicine in that State is terminated.

(c) Accreditation shall be automatically revoked when an accredited veterinarian is convicted of a crime in either State or Federal court, if such conviction is based on the performance or nonperformance of any act required of him in his capacity as an accredited veterinarian.

(d) Any suspension or revocation of accreditation for failure to comply with the Standards shall be applicable in all States in which the veterinarian is accredited.

[39 FR 23050, June 26, 1974, as amended at 42 FR 41850, Aug. 19, 1977]

PART 162—RULES OF PRACTICE GOVERNING REVOCATION OR SUSPENSION OF VETERINARIANS' ACCREDITATION

Subpart A—General

Sec.

162.1 Scope and applicability of rules of practice.

Subpart B—Supplemental Rules of Practice

162.10 Summary suspension of accreditation of veterinarians.
162.11 Notification.
162.12 Informal conference.
162.13 Formal complaint.

AUTHORITY: 23 Stat. 32, as amended; 26 Stat. 417; 32 Stat. 791.792, as amended; 33 Stat. 1265, as amended; 41 Stat. 699; 58 Stat. 734; 65 Stat. 693; 84 Stat. 1406 (15 U.S.C. 1828; 21 U.S.C. 105, 111, 114a-1, 115, 116, 120, 121, 125, and 134f).

SOURCE: 42 FR 10960, Feb. 25, 1977, unless otherwise noted.

Subpart A—General

§ 162.1 Scope and applicability of rules of practice.

The Uniform Rules of Practice for the Department of Agriculture pro-

mulgated in Subpart H of Part 1, Subtitle A, Title 7, Code of Federal Regulations, are the Rules of Practice applicable to adjudicatory, administrative proceedings for the revocation or suspension of accreditation of veterinarians (9 CFR Parts 160 and 161). In addition, the Supplemental Rules of Practice set forth in Subpart B of this Part shall be applicable to such proceedings.

Subpart B—Supplemental Rules of Practice

§ 162.10 Summary suspension of accreditation of veterinarians.

In any situation where the Administrator has reason to believe that any veterinarian accredited under the provisions of 9 CFR Parts 160 and 161 has not complied with the "Standards for Accredited Veterinarians" set forth in 9 CFR 161.2, and he deems such action necessary in order to adequately protect the public health, interest, or safety, the Administrator may suspend the accreditation of such veterinarian pending final determination in the proceeding, effective upon oral or written notification, whichever is earlier. In the event of oral notification, a written confirmation thereof shall be given to such veterinarian pursuant to §1.147(b) of the Uniform Rules of Practice (7 CFR 1.147(b)) as promptly as circumstances permit. Such suspension shall have no relevance with respect to the final determination in the proceeding.

§ 162.11 Notification.

The Veterinarian in Charge shall notify the accredited veterinarian when there is reason to believe that he has not complied with the "Standards for Accreditcd Veterinarians" as contained in 9 CFR 161.2. The notification shall be in writing and shall include a statement of the basis for the belief that the accredited veterinarian has failed to comply with the standards and shall notify the accredited veterinarian of the desire of the Veterinarian in Charge to arrange an informal conference to discuss the matter.

§ 162.12 Informal conference.

(a) The Veterinarian in Charge, with the concurrence of the State Animal Health Official and the accredited veterinarian, shall designate the time and place for the holding of an informal conference to review the matter.

(b) If during, or at the conclusion of, the informal conference, the Veterinarian in Charge determines that a warning will be adequate to attain compliance with the standards, he may issue such warning in writing to the accredited veterinarian without further procedure.

(c) If prior to, during, or at the conclusion of, the informal conference, the accredited veterinarian consents, in writing, to the issuance of an order revoking or suspending his accreditation for a specified period of time, in lieu of further procedure, the Veterinarian in Charge may issue such an order without further procedure.

§ 162.13 Formal complaint.

If a consent order has not been issued, or if, after an informal conference, the Veterinarian in Charge has not issued a warning to the accredited veterinarian, a complaint in writing shall be issued by the Administrator in accordance with §1.135 of the Uniform Rules of Practice (7 CFR 1.135).

PART III

APHIS-VS Forms Commonly Used by Accredited Veterinarians

"Brucellosis Test Record" sample will be provided at next printing.

Movement of restricted animals must be accompanied by permit (9 CFR 71 through 85)

U.S. DEPARTMENT OF AGRICULTURE
ANIMAL AND PLANT HEALTH INSPECTION SERVICE
VETERINARY SERVICES

PERMIT FOR MOVEMENT OF RESTRICTED ANIMALS

USE A SEPARATE FORM FOR EACH SPECIES

FORM APPROVED
OMB NO. 0579-0051

No. A000032

5. STATE WHERE ISSUED

1. NAME AND ADDRESS OF SHIPPER OR CONSIGNOR *(Include Zip Code)*

6. MOVEMENT TO BE
☐ INTERSTATE ☐ INTRASTATE

7. MOVEMENT FOR
☐ QUARANTINE ☐ SLAUGHTER

2. CONSIGNEE *(Destination Name and Address, include Zip Code)*

8. DISEASE

9. STATUS OF ANIMALS
No Reactor | No Exposed | No Other *(Specify)*

10. STATUS OF HERD OF ORIGIN

11. STATUS OF AREA OF ORIGIN

3. MOVED FROM *(Name and Location of Premise if other than item 1 above)*

12. NO. ANIMALS IN THIS SHIPMENT

13. SPECIES *(One Only)*

4. NAME AND ADDRESS OF OWNER AT TIME CONDITION DIAGNOSED

14. TRANSPORTATION VEHICLE LICENSE NO. OR OTHER IDENTIFICATION NO.

15. SEAL NO

16. VEHICLE REQUIRED TO BE CLEANED & DISINFECTED AT DESTINATION
☐ Yes ☐ No
(If Yes, Items 32, 33 and 34 are Applicable)

VALID ONLY FOR ABOVE DESTINATION

17. ANIMALS TO BE MOVED

COMPLETE EAR TAG NO.	BREED	SEX	DISEASE BRAND	OTHER IDENTIFICATION *(Complete No.)*	COMPLETE EAR TAG NO.	BREED	SEX	DISEASE BRAND	OTHER IDENTIFICATION *(Complete No.)*

DRAFT

I certify that I have inspected the animals described on this permit and find them eligible to move in accordance with the requirements of State and Federal regulations

18. SIGNATURE OF INSPECTOR	19. DATE ISSUED	20. TIME ISSUED	VOID AFTER	
			21. DATE	22. TIME

WARNING TO OWNER, SHIPPER AND TRUCKER - LIVESTOCK MUST BE DELIVERED TO CONSIGNEE WITHOUT DIVERSION

I understand that it is a violation of Federal law to move the animals identified herein interstate except in accordance with the provisions of applicable Federal Regulations. I also understand that such animals must comply with existing state laws and regulations governing movement of livestock and poultry. I have arranged or will arrange for a copy of this permit to accompany the interstate shipment and be delivered with the above described animals

23. SIGNATURE OF OWNER OR SHIPPER	24. TITLE	25. DATE SIGNED
	☐ Owner ☐ Shipper	

I certify that the animals described on this permit were received and slaughtered/quarantined in accordance with the requirements of the State and Federal regulations on the date indicated in item 29

26. PLACE ANIMALS RECEIVED	27. DATE ANIMALS ARRIVED	28. NO. ANIMALS RECEIVED	29. DATE SLAUGHTERED/QUARANTINED

30. DATE AND TIME SEALS BROKE	31. AUTHORIZED SIGNATURE	32. DATE CLEANED & DISINFECTED *(If required)*	33. SIGNATURE OF INSPECTOR	34. DATE SIGNED

VS FORM 1-27 (DEC 80) *Replaces VS Form 1-27 (JAN 73) which may be used*

PART 1 - TO ACCOMPANY SHIPMENT

U. S. DEPARTMENT OF AGRICULTURE
ANIMAL AND PLANT HEALTH INSPECTION SERVICE
VETERINARY SERVICES

SPECIMEN SUBMISSION

NOTE: Complete all applicable items. Use additional sets of this form for additional specimens.

A. NAME & ADDRESS OF OWNER ●

PAGE OF

STREET

CITY | STATE | ZIP CODE

LOCATION OF ANIMALS

B. STATE ● | C. COUNTY ●

D. COLLECTED BY | E. DATE COLLECTED

LABORATORY EXAMINATION AUTHORIZED BY *("X" one)*

☐ APHIS VIC ☐ EMERGENCY PROGRAMS

OTHER *(Specify)*

NAME OF AUTHORIZING OFFICIAL

F. NAME OF SUBMITTING VETERINARIAN ●

G. REFERRAL NO. OR MPI ESTABLISHMENT NO. ●

STREET

H. DISEASES SUSPECTED ●

CITY | STATE | ZIP CODE

I. EXAMINATIONS REQUESTED ●

	● MATERIAL SUBMITTED	● IDENTIFICATION	● ANIMAL SPECIES	AGE YRS.	AGE MOS.	SEX ●	● PRESERVATION *(Fresh, Frozen, Formalin, Borax, etc.)*
1							
2							
3							
4							
5							
6							
7							
8							
9							
0							

J. "X" ONE ●

☐ DIAGNOSTIC ☐ IMPORT ☐ EXPORT

COUNTRY OF ORIGIN/DESTINATION

K. ADDITIONAL DATA *(History, Clinical Signs, Post Mortem findings, remarks, etc., or State of destination if animals are to be Shipped. Use additional sheets, if necessary. Attach 5 copies).*

ACCESSION NO.

SIGNATURE OF SUBMITTOR

LABORATORY USE ONLY

L CONDITION ●	PRIORITY	DISTRIBUTION	RECEIVED BY

VS FORM 10-4
(APR 80)

Previous editions may be used.

ORIGINAL
(Submit with Specimen)

ALL INCOMPLETE RECORDS WILL BE RETURNED FOR COMPLETION

STATE

COOPERATIVE STATE-FEDERAL TUBERCULOSIS ERADICATION PROGRAM

TUBERCULOSIS TEST RECORD

420506

COUNTY	TWP	SEC	HERD OWNER LAST	FIRST	INITIAL

PREVIOUS TEST DATE	VET CODE	TOTAL	REA	SUS

HERD NUMBER	ROUTE STREET ROAD

LES ION	TEST	D B	U	POST OFFICE	STATE

CERTIFICATION FOR PAYMENT

☐ PROGRAM (State Federal Expense) ☐ PRIVATE (Owners Expense)

DATE LISTED

I certify:
That this test was made by me on each of the cattle identified below on the dates and with the results as entered in appropriate spaces.
That when payment is claimed at program expense in accordance with agreement number below, no payment has been or will be received from any other source.

COUNTY	TOWNSHIP OR DISTRICT	SEC	FARM NO

REASON FOR TEST

1 AREA		6 RETEST			
2 HERD RE-ACCREDIT		7 TRACING REG. RIL			
3 MILK ORDINANCE		8 TRACING REACTORS			
4 SALE SHOW		9 TRACING EXPOSED			
5 IMPORTED		10 OTHER			

COMPLETE HERD TEST OF ALL ELIGIBLE ANIMALS

☐ YES ☐ NO NO. IN HERD

KIND OF HERD

☐ DAIRY ☐ BEEF ☐ MIXED

METHOD OF TEST

☐ CAUDAL
☐ VULVA
☐ CERVICAL

SUMMARY

NEGATIVE	
SUSPECT	
REACTOR	
TOTAL	

SIGNATURE	AGREE CODE

INJECTION	DATE	HOUR

OBSERVATION	DATE	HOUR

REACTORS TAGGED AND BRANDED DATE	SIGNATURE	AGREE CODE

1	IDENTIFICATION NUMBER	AGE	BREED	SEX	RESULTS SIZE	RESULTS NRS	REACTOR TAG NUMBER	1	IDENTIFICATION NUMBER	AGE	BREED	SEX	RESULTS SIZE	RESULTS NRS	REACTOR TAG NUMBER
	1								16						
	2								17						
	3								18						
	4								19						
	5								20						
	6								21						
	7								22						
	8								23						
	9								24						
	10								25						
	11								26						
	12								27						
	13								28						
	14								29						
	15								30						

RT - Retag
NA - Natural Addition
PA - Purchased Addition

N - Negative
S - Suspect
R - Reactor

I hereby acknowlege receiving a copy of this record which I have examined and find correct.

DATE | OWNER'S SIGNATURE

THIS AUTHORIZATION TO TEST EXPIRES

VS FORM 6 22
JULY 1975

PREVIOUS EDITIONS OBSOLETE

OFFICE

This certificate is authorized by law *(21 USC 112)*, while you are not required to respond, no health certificate can be validated unless the data requested is provided FORM APPROVED OMB NO 40-R3436

U. S. DEPARTMENT OF AGRICULTURE
ANIMAL AND PLANT HEALTH INSPECTION SERVICE
VETERINARY SERVICES
RCS # 34 - VS - 43

UNITED STATES ORIGIN HEALTH CERTIFICATE

(This Document does not replace Certificate of Inspection of Export Animals, VS Form 17-37).

1 CONSIGNOR'S NAME *(Last name, first name, middle initial or business name)*

2 CERTIFICATE NO. 894653

3 PAGE NO 1 OF

4. DATE ISSUED

5. U.S. PORT OF EMBARKATION *(City & State)*

6. STATE CODE

7 CONSIGNOR'S STREET ADDRESS *(Mailing address)*

8 CONSIGNOR'S CITY *(or Town)*

12. CONSIGNOR'S STATE

13 STATE CODE

14 ZIP CODE

9 SEMEN *(Check if Yes)* ☐

10 NO DOSES OF SEMEN

11 TRANSPORTATION CLASS
1 - Rail 3 - Air
2 - Truck 4 - Ocean ☐

16 CONSIGNEE'S NAME AND STREET ADDRESS *(Mailing address)*

DESTINATION COUNTRY

ENTER CODE

15 SPECIES *(Check one - use VS form 17-6 for Poultry)*
☐ 01 BOVINE ☐ 02 PORCINE ☐ 03 OVINE ☐ 04 CAPRINE
☐ 05 EQUINE ☐ 08 OTHER WILDLIFE - MAMMAL
☐ 09 OTHER *(Specify)*

NEGATIVE TUBERCULIN READING
48 HRS. ☐ 72 HRS. ☐

BRUCELLOSIS BLOOD SAMPLE COLLECTED
CERTIFIED BRUCELLOSIS FREE AREA

NEGATIVE RESULTS OF OTHER TESTS

If more lines needed below - use VS Form 17-140A.

17 FARM ORIGIN
Owner's name *(Last name, two initials, or business name)*
Owner's street address
Owner's city/town, state code (FIPS code on reverse) & zip code

MODIFIED ACCREDITED AREA (TB)

18 INDIVIDUAL IDENTIFICATION *(Instructions for columns A, B, C & D on reverse)*

ID NO OR DESCRIPTION A	AGE B	SEX C	BREED D	✓ E	DATE F	✓ G	DATE H	VAC. I	1/25 J	1/50 K	1/100 L	DISEASE TYPE TEST DATE M	DISEASE TYPE TEST DATE N	DISEASE TYPE TEST DATE O

VALID ONLY IF USDA VETERINARY SEAL APPEARS HERE

CERTIFICATION BY ISSUING VETERINARIAN

This is to certify that the animals identified above were inspected by me on this date and found to be free from evidence of communicable disease and insofar as can be determined exposure thereto; the premises of origin are not under Federal or State quarantine because of animal disease; the animals were all negative to the tests shown on the dates indicated. Arrangements have been made for the animals to be handled in a transporting vehicle that has been cleaned and disinfected since last used for livestock and for movement to the port of embarkation without exposure to other animals en route, except those meeting these health requirements. The shipment must be accompanied to the port of export with this certificate.

19 DATE ENDORSED

20 NAME OF ISSUING VETERINARIAN *(Last name, first name, middle initial - please print)*

21 STATUS
☐ 1 State ☐ 2 Federal
☐ 3 Accredited

22 TOTAL NO ANIMALS *(Certified for export or donated semen)*
(Include No. from all attached VS Forms 17-140A).

24 NAME OF ENDORSING FEDERAL VET. *(Type, print or stamp)*

25 SIGNATURE OF ISSUING VETERINARIAN

23 Signature of endorsing federal veterinarian

VS FORM 17-140
(MAR 78) *Edition of 7-77 obsolete*

TO ACCOMPANY SHIPMENT

PART IV

Directory of Offices of Federal Area Veterinarians in Charge

Correspondence should be addressed to:
Area Veterinarian in Charge
Veterinary Services
APHIS- USDA

Illinois

P. O. Box 3126
Springfield, IL 62708
Phone: (217) 492-4104

Indiana

5610 Crawfordsville Road
Suite 1000
Indianapolis, IN 46224
Phone: (317) 331-6132

Maryland

6525 Belcrest Road
Presidential Building, Room 601
Hyattsville, MD 20782
Phone: (301) 436-8044

Massachusetts-Connecticut-Maine-New Hampshire-Rhode Island-Vermont

424 Trapelo Road, Building 134-N
Waltham, MA 02154
Phone: (617) 894-2400

Michigan

300 South Walnut
Lewis Cass Building
Lansing, MI 48913
Phone: (517) 377-1656

Minnesota

Metro Square Building
7th & Robert Street, Room LL58
St. Paul, MN 55101
Phone: (612) 725-7691

New Jersey

2333 Whitehorse-Mercerville Rd.
Suite 6
Trenton, NJ 08619
Phone: (609) 989-2255

New York

80 Wolf Road, Suite 503
P.O. Box 938
Trenton, NJ 08605
Phone: (609) 989-2255

Ohio

P.O. Box 264
Pickerington, OH 43147
Phone: (614) 469-5602

Pennsylvania

2301 N. Cameron Street, Room 413
Harrisburg, PA 17120
Phone: (717) 782-3440

Virginia

823 East Main Street, Suite 600
Richmond, VA 23219
Phone: (804) 771-2774
(804) 786-2483

West Virginia

4720 Brenda Lane, Building 5
Charleston, WV 25312
Phone: (304) 345-5725

Wisconsin

801 West Badger Road
P.O. Box 8911
Madison, WI 53708
Phone: (608) 252-5208

NORTH CENTRAL REGION

Colorado

2490 West 26th Avenue, Room 237
Denver, CO 80211
Phone: (303) 837-3481

Iowa

Federal Building, Room 877
210 Walnut Street
Des Moines, IA 50309
Phone: (913) 295-2840

Kansas

P.O. Box 1518
Topeka, KS 66601
Phone: (913) 295-2840

Missouri

230 Chancellor Building
P.O. Box 1027
Jefferson City, MO 65102
Phone: (314) 636-3116

Montana

Old Highway Building, Capitol Station
Helena, MT 59601
Phone: (406) 449-5407

Nebraska

P.O. Box 681866
Lincoln, NE 68501
Phone: (402) 471-5441

North Dakota

P.O. Box 639
Bismarck, ND 58502
Phone: (701) 255-4011, Ext. 211

South Dakota

200 West Pleasant Drive
Pierre, SD 57501
Phone: (605) 224-6186

Utah

220 South 200 East
Salt Lake City, UT 84111
Phone: (801) 524-5010

Wyoming

P.O. Box 825
Cheyenne, WY 82001
Phone: (307) 778-2220, Ext. 186

Alabama

Beard Office Building
1445 Federal Building
Montgomery, AL 36109
Phone: (205) 832-7350

Florida

P.O. Box 660400
Miami Springs, FL 33166
Phone: (305) 593-3211

Georgia

1000 Iris Drive
Suite G
Conyers, GA 30208
Phone: (404) 922-7860

Kentucky

P.O. Box 399
Frankfort, KY 40601
Phone: (502) 582-5431

Mississippi

1223 New Federal Building
Jackson, MS 39201
Phone: (601) 969-4307

North Carolina

P.O. Box 28103
Raleigh, NC 27611
Phone: (919) 755-4170

Puerto Rico-Virgin Islands

G.P.O. Call Box 71355
San Juan, PR 00936
Phone: (809) 724-0460

South Carolina

P.O. Box 2827
Columbia, SC 29202
Phone: (803) 765-5612

Tennessee

P.O. Box 348
Brentwood, TN 37027
Phone: (615) 251-5594

SOUTH CENTRAL REGION

Arkansas

P.O. Box 3548
Little Rock, AR 72203
Phone: (501) 378-5254

Louisiana

P.O. Box 1391
Baton Rouge, LA 70821
Phone: (504) 389-0436

New Mexico

P.O. Box 464
Albuquerque, NM 87103
Phone: (505) 766-2573

Oklahoma

P.O. Box 1768
Oklahoma City, OK 73101
Phone: (405) 231-4335

Texas

702 Colorado Street, Room 301
Austin, TX 78701
Phone: (512) 397-5551

WESTERN REGION

Arizona

2234 North Seventh Street
Phoenix, AZ 85006
Phone: (602) 261-3391

California

83 Scripp Drive
Sacramento, CA 95825
Phone: (916) 484-4891

Hawaii

300 Ala Moana Boulevard, Room 4320
Honolulu, HI 96850
Phone: (808) 546-7529

Idaho

Owyhee Plaza, Suite 290
P.O. Box 9426
Boise, ID 83707
Phone: (208) 334-1201

Nevada

502 Service
1550 S. Wells Avenue
Reno, NV 89502
Phone: (702) 784-5414

Oregon

530 Center Street, NE
Salem, OR 97301
Phone: (503) 399-5871

Washington-Alaska

P.O. Box 1488
Olympia, WA 98507
Phone: (206) 753-9430

Issued July 1981

☆ U. S. GOVERNMENT PRINTING OFFICE : 1981 720-001/3620